



STIC EIC 2100 Search Request Form

186677

Today's Date: 4/20/06

What date would you like to use to limit the search?

Priority Date: 6/1/00 Other: _____

Name Nguyen, Cam Linh
AU 2161 Examiner # 78921
Room # RND-3C21 Phone 2-4024
Serial # 091 872, 499

Format for Search Results (Circle One):

PAPER DISK EMAIL

Where have you searched so far?

USP DWPI EPO JPO ACM IBM TDB

IEEE INSPEC SPI Other _____

Is this a "Fast & Focused" Search Request? (Circle One) YES NO

A "Fast & Focused" Search is completed in 2-3 hours (maximum). The search must be on a very specific topic and meet certain criteria. The criteria are posted in EIC2100 and on the EIC2100 NPL Web Page at <http://ptoweb/patents/stic/stic-tc2100.htm>.

What is the topic, novelty, motivation, utility, or other specific details defining the desired focus of this search? Please include the concepts, synonyms, keywords, acronyms, definitions, strategies, and anything else that helps to describe the topic. Please attach a copy of the abstract, background, brief summary, pertinent claims and any citations of relevant art you have found.

- Aggregation with (data or info or Record)
- hierarchical tree with node
- Determined key parameter - Exists → Not add node
→ add node corresponding key parameter to tree
- Determined with key with not exists → Add node & corresponding node

STIC Searcher Ruth Spink Phone 2-3524

Date picked up 4/24/06 Date Completed 4/24/06





STIC Search Report

EIC 2100

STIC Database Tracking Number: 186677

TO: Cam-Linh T Nguyen
Location: RND 3C21
Art Unit: 2161
Monday, April 24, 2006

Case Serial Number: 09/872499

From: Ruth E. Spink
Location: EIC 2100
RND-4B31
Phone: 23524

Ruth.spink@uspto.gov

Search Notes

Cam-Linh- Attached is the foreign patent and NPL search for the above referenced case. Be sure to contact me if you wish to refocus this search.

Ruth



STIC Search Results Feedback Form

EIC 2100

Questions about the scope or the results of the search? Contact *the EIC searcher* or contact:

Anne Hendrickson, EIC 2100 Team Leader
272-3490, RND 4B28

Voluntary Results Feedback Form

➤ I am an examiner in Workgroup: Example: 2133

➤ Relevant prior art *found*, search results used as follows:

- ☐ 102 rejection
- ☐ 103 rejection
- ☐ Cited as being of interest.
- ☐ Helped examiner better understand the invention.
- ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature
(journal articles, conference proceedings, new product announcements etc.)

➤ Relevant prior art *not found*:

- ☐ Results verified the lack of relevant prior art (helped determine patentability).
- ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

Drop off or send completed forms to STIC/EIC2100 RND, 4B28



Set	Items	Description
S1	86955	AGGREGATE? ? OR AGGREGATING OR AGGREGATOR? ? OR AGGREGATIO- N? ?
S2	88100	HIERARCHY OR HIERARCHICAL OR HIERARCHIES OR TIER? OR (MULTI OR MULTIPLE? ? OR MULTIPLICITY OR PLURAL?)() (LEVEL? OR LAYE- R?) OR TIER?
S3	52237	TREE OR TREES OR BTREE? ?
S4	25800	DATA(5N)STRUCTURE? ?
S5	248406	KEY OR KEYS
S6	3067911	EXIST OR EXISTS OR EXISTING OR PRESENT OR THERE OR INCLUDED
S7	57033	EXISTENCE
S8	99056	NODE OR NODES
S9	1859	(ADD OR ADDS OR ADDED OR ADDING OR ADDITION OR APPEND?? OR APPENDING OR INSERT?? OR INSERTING) (3N) S8
S10	4071	(S6 OR S7) (3N) S5
S11	1	S10 (10N) S9
S12	7118	(S6 OR S7) (7N) S5
S13	1	S12 (10N) S9
S14	3	S12 AND S9
S15	2	S14 NOT S11
S16	3343	S5 (7N) (FIND OR FINDING OR FOUND OR LOCATE? ? OR LOCATING)
S17	1	S16 AND S9
S18	35750	(ADD OR ADDS OR ADDED OR ADDING OR ADDITION OR APPEND?? OR APPENDING OR INSERT?? OR INSERTING) (3N) (ELEMENT? ? OR ITEM? ? OR PARENT? ? OR CHILD OR CHILDREN)
S19	34	(S12 OR S16) AND S18
S20	1	S19 AND (S2 OR S3 OR S4)
S21	577	(S2 OR S3 OR S4) (3N) (UPDATE? ? OR UPDATING OR UP() (DATE? ? OR DATING) OR REVISION? ? OR REVI?E? ?)
S22	4	S12 AND S21
S23	2	S22 NOT (S11 OR S13 OR S15 OR S17 OR S20)

File 347:JAPIO Dec 1976-2005/Dec(Updated 060404)
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File 350:Derwent WPIX 1963-2006/UD,UM &UP=200626
(c) 2006 Thomson Derwent

11/5/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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014550147 **Image available**
WPI Acc No: 2002-370850/200240
XRPX Acc No: N02-289728

Automatic record aggregation method using computer, involves adding node representing contents of input record to hierarchical tree and updating values of added node and next higher level node, for all input records

Patent Assignee: NIPPON INTERSYSTEMS KK (NIIN-N); IZUMI T (IZUM-I)

Inventor: IZUMI T

Number of Countries: 002 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20020010696	A1	20020124	US 2001872499	A	20010601	200240 B
JP 2001344558	A	20011214	JP 2000165152	A	20000601	200240

Priority Applications (No Type Date): JP 2000165152 A 20000601

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20020010696	A1		15	G06F-017/30	
JP 2001344558	A		13	G06F-019/00	

Abstract (Basic): US 20020010696 A1

NOVELTY - A node representing contents of an input record, is added to a specific position of a hierarchical tree, corresponding to a **key** parameter **included** in the input record. The values of the **added node** and a next higher level node, are updated based on a numerical value included in the input record. Adding and updating processes are repeated until all the input records are processed.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

(a) Automatic record aggregation apparatus; and

(b) Recorded medium storing automatic record aggregation program.

USE - For aggregating record containing product information using computer connected to Internet, automatically.

ADVANTAGE - Since the value of node is updated simultaneously with addition of the contents of the input record, huge number of records can be instantaneously aggregated. Aggregation processing program referred as generalized filtering program provides a signified effect that the necessity of rewriting the program for each application is eliminated.

DESCRIPTION OF DRAWING(S) - The figure shows the nodes to be added to hierarchical tree.

pp; 15 DwgNo 4/9

Title Terms: AUTOMATIC; RECORD; AGGREGATE; METHOD; COMPUTER; ADD; NODE; REPRESENT; CONTENT; INPUT; RECORD; HIERARCHY; TREE; UPDATE; VALUE; ADD; NODE; HIGH; LEVEL; NODE; INPUT; RECORD

Derwent Class: T01

International Patent Class (Main): G06F-017/30; G06F-019/00

International Patent Class (Additional): G06F-012/00; G06F-017/60

File Segment: EPI

15/5/1 (Item 1 from file: 347)
DIALOG(R)File 347:JAPIO
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07116890 **Image available**
AUTOMATIC SUMMING UP METHOD AND DEVICE AND RECORDING MEDIUM

PUB. NO.: 2001-344558 [JP 2001344558 A]
PUBLISHED: December 14, 2001 (20011214)
INVENTOR(s): IZUMI NAONORI
APPLICANT(s): NIHON INTERSYSTEMS CO LTD
APPL. NO.: 2000-165152 [JP 2000165152]
FILED: June 01, 2000 (20000601)
INTL CLASS: G06F-019/00; G06F-012/00; G06F-017/30; G06F-017/60

ABSTRACT

PROBLEM TO BE SOLVED: To provide an automatic summing up method capable of instantaneously summing up a vast number of records.

SOLUTION: This automatic summing up method includes a step (S1) in which one of a plurality of records is inputted to a computer, steps (S2 to S4) in which at least one node showing the contents of the inputted records is added to a hierarchical tree at a position corresponding to a **key** item **included** in the inputted records, a step (S5) in which the value of at least one **node added** to the hierarchical tree and the value of a node in a hierarchy higher than at least one **node added** to the hierarchical tree are updated according to a numerical value included in the inputted records and a step (S6) in which summing up results in each key item are outputted by repeating the steps (S1) to (S5) up to reaching the last record among the plurality of records.

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15/5/2 (Item 2 from file: 347)
DIALOG(R)File 347:JAPIO
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04883219 **Image available**
KEY WORD RETRIEVING METHOD

PUB. NO.: 07-175819 [JP 7175819 A]
PUBLISHED: July 14, 1995 (19950714)
INVENTOR(s): TAKESHITA ATSUSHI
NAKAGAWA TORU
APPLICANT(s): NIPPON TELEGR & TELEPH CORP <NTT> [000422] (A Japanese
Company or Corporation), JP (Japan)
APPL. NO.: 05-319968 [JP 93319968]
FILED: December 20, 1993 (19931220)
INTL CLASS: [6] G06F-017/30
JAPIO CLASS: 45.4 (INFORMATION PROCESSING -- Computer Applications)

ABSTRACT

PURPOSE: To provide a key word retrieving method which enables a user to effectively acquire his desired information.

CONSTITUTION: In a text three generating process 1, a text is divided into the direct control blocks corresponding directly to each topic word. Then a tree structure is generated to reflect the nesting relation of topic words, and furthermore the direct control blocks corresponding to the topic words of each node of the tree structure are **added** to these **nodes**. In a sub-key word extracting process 2, a word (sub-key word) having a concrete meaning is extracted out of the words **included** in a **key** word 5. In a center degree calculating process 3, a sub-key word checks through matching whether the topic word included in a relevant node is included in a direct control block or not. Then a mark is given to the matched topic word or direct control block, and an occupied area is recognized based on a text tree wearing a mark. Finally the center degree is calculated to show a ratio between the number of simple sentences included in the occupied area and the number of simple sentences included in the text respectively.

23/5/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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012936911 **Image available**
WPI Acc No: 2000-108758/200010
XRPX Acc No: N00-083716

A method of collecting information about document retrievals over the World-Wide-Web (WWW)

Patent Assignee: INT BUSINESS MACHINES CORP (IBMC)
Inventor: CUOMO G A; NGUYEN B Q; SINGHAL S K
Number of Countries: 002 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
GB 2339938	A	20000209	GB 999024	A	19990421	200010 B
US 6185614	B1	20010206	US 9884452	A	19980526	200109
GB 2339938	B	20021127	GB 999024	A	19990421	200303

Priority Applications (No Type Date): US 9884452 A 19980526

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
GB 2339938	A		20	G06F-017/30	
US 6185614	B1			G06F-015/173	
GB 2339938	B			G06F-017/30	

Abstract (Basic): GB 2339938 A

NOVELTY - The method comprises the steps of: receiving a requesting user identity, requested Universal Resource Identifier (URI), and a content of a retrieved document; selecting a Candidate Document from a Retrieved Document Database, the Candidate Document associated with a Candidate Document Key; comparing the retrieved document to the Candidate Document to determine their similarity;

DETAILED DESCRIPTION - Associating the retrieved document with a Retrieved Document Key; and adding a Log File Entry including the request user identity, the requested URI and the Retrieved Document **Key**. **INDEPENDENT CLAIMS** are also **included** for the following:

- (1) a system for collecting information; and
- (2) a computer program product

USE - The collection of information about document retrieval over the WWW

ADVANTAGE - Each URI is potentially linked with multiple documents, each having different content. At the same time, the analysis ignores minor differences between documents, as might arise when page content is customized in minor ways to reflect the identity of the requesting user.

DESCRIPTION OF DRAWING(S) - The drawing shows a flowchart showing how an Access Information Collector analyzes a document retrieved from a web server and **updates** its **data structures**.

pp; 20 DwgNo 4/4

Title Terms: METHOD; COLLECT; INFORMATION; DOCUMENT; WORLD; WIDE; WEB
Derwent Class: T01
International Patent Class (Main): G06F-015/173; G06F-017/30
International Patent Class (Additional): G06F-007/00; G06F-015/16
File Segment: EPI

Set	Items	Description
S1	102942	AGGREGATE? ? OR AGGREGATING OR AGGREGATOR? ? OR AGGREGATIO- N? ?
S2	164164	HIERARCHY OR HIERARCHICAL OR HIERARCHIES OR TIER? OR (MULTI OR MULTIPLE? ? OR MULTIPLICITY OR PLURAL?) () (LEVEL? OR LAYE- R?) OR TIER?
S3	50683	TREE OR TREES OR BTREE? ?
S4	61080	DATA(5N)STRUCTURE? ?
S5	210005	KEY OR KEYS
S6	36530	S5 (10N) (EXIST OR EXISTS OR EXISTING OR PRESENT OR THERE - OR INCLUDED OR EXISTENCE)
S7	104696	NODE OR NODES
S8	9670	(ADD OR ADDS OR ADDED OR ADDING OR ADDITION OR APPEND?? OR APPENDING OR INSERT?? OR INSERTING) (3N) S7
S9	18	S6 (10N) S8
S10	6	S9 (50N) (S1 OR S2 OR S3 OR S4)
S11	6	IDPAT (sorted in duplicate/non-duplicate order)
S12	6	IDPAT (primary/non-duplicate records only)
S13	17	S9 AND IC=G06F
S14	11	S13 NOT S12
S15	11	IDPAT (sorted in duplicate/non-duplicate order)
S16	10	IDPAT (primary/non-duplicate records only)
S17	19035	S7 (5N) (EXIST OR EXISTS OR EXISTENCE OR EXISTING OR PRESE- NT OR THERE OR INCLUDED)
S18	312	S17 (10N) S5
S19	9	S18 (10N) S8
S20	2	S19 NOT (S12 OR S16)
S21	56	S17 (30N) S5 (30N) S8
S22	19	S21 (50N) (S1 OR S2 OR S3 OR S4)
S23	15	S22 NOT (S12 OR S16 OR S20)
S24	15	IDPAT (sorted in duplicate/non-duplicate order)
S25	15	IDPAT (primary/non-duplicate records only)
S26	81494	(ADD OR ADDS OR ADDED OR ADDING OR ADDITION OR APPEND?? OR APPENDING OR INSERT?? OR INSERTING) (3N) (ELEMENT? ? OR ITEM? ? OR PARENT? ? OR CHILD OR CHILDREN)
S27	210	(S6 OR S17) (30N) S5 (30N) S26
S28	20	S27 (50N) (S1 OR S2 OR S3 OR S4)
S29	17	S28 NOT (S12 OR S16 OR S25)
S30	17	IDPAT (sorted in duplicate/non-duplicate order)
S31	17	IDPAT (primary/non-duplicate records only)

File 348:EUROPEAN PATENTS 1978-2006/ 200616
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File 349:PCT FULLTEXT 1979-2006/UB=20060420,UT=20060413
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12/5,K/2 (Item 2 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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00678279

Computer method and storage structure for storing and accessing multidimensional data.

Rechenverfahren und Speicherstruktur zur Speicherung und zum Zugriff auf mehrdimensionale Daten.

Procede informatique et structure de stockage pour stocker et acceder a des donnees multidimensionnelles.

PATENT ASSIGNEE:

MICROSOFT CORPORATION, (749861), One Microsoft Way, Redmond, Washington 98052-6399, (US), (applicant designated states: DE;FR;GB)

INVENTOR:

Reiter, Allen, 61 a Einstein Street, Haifa, (IL)

Jose, Ian Charles, 14507 NE 37th Place, F-17, Bellevue, Washington 98007, (US)

LEGAL REPRESENTATIVE:

Patentanwalte Grunecker, Kinkeldey, Stockmair & Partner (100721), Maximilianstrasse 58, D-80538 Munchen, (DE)

PATENT (CC, No, Kind, Date): EP 650131 A1 950426 (Basic)

APPLICATION (CC, No, Date): EP 94116500 941019;

PRIORITY (CC, No, Date): US 139916 931020

DESIGNATED STATES: DE; FR; GB

INTERNATIONAL PATENT CLASS (V7): G06F-017/30;

ABSTRACT EP 650131 A1

A computer method and storage structure for storing and accessing multidimensional data is provided. A tree manager provided by the present invention stores data such as pointers, variable length data records, other B-trees, and directories, in a Multidimensional B-tree (MDB-tree). An MDB-tree has an imbedded "parent-child" structure which allows subtrees to be stored within nodes. The subtrees contain subnodes, which, in turn, may contain subtrees. The nodes are indexed by a primary key value while the subnodes in a subtree are indexed by secondary key values. Nodes of a MDB-tree contain a key value table, a subnode table, and a data area. When the tree manager attempts to store a unit of data

on a page and the unit of data is too large for the page, the tree manager attempts to split a node currently stored on the page (or the unit of data being inserted) into a subnode and a subtree. The subtree is then stored on a new page. If the unit of data cannot be split into a subnode and a subtree, then one or more of the node currently stored on the page are moved to a new page. (see image in original document)

ABSTRACT WORD COUNT: 201

LEGAL STATUS (Type, Pub Date, Kind, Text):

Refusal: 010912 A1 Date European patent application was refused: 20010315

Application: 950426 A1 Published application (A1with Search Report ;A2without Search Report)

Examination: 951213 A1 Date of filing of request for examination: 951018

Examination: 990203 A1 Date of despatch of first examination report: 981217

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPAB95	2417
SPEC A	(English)	EPAB95	6121
Total word count - document A			8538
Total word count - document B			0
Total word count - documents A + B			8538

...SPECIFICATION When a node is allowed to occupy an entire page, key values and pointers are **added** to the **node** until the node and page are full, i.e., **there** is no space available in the page. To add a **key** value to a node that is full, the node is split into two nodes, an additional page is allocated to the B- **tree**, and one of the two nodes is stored on the new page. The other node...

12/5,K/3 (Item 3 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

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00671466

Computer method and system for b-tree optimization

Computerverfahren und -system zur Optimierung von Beta-Bäumen

Methode et système informatiques pour l'optimisation d'arbres-beta

PATENT ASSIGNEE:

MICROSOFT CORPORATION, (749861), One Microsoft Way, Redmond, Washington
98052-6399, (US), (Proprietor designated states: all)

INVENTOR:

Berkowitz, Brian Thomas, 3912 142nd Place NE, Bellevue, Washington 98007,
(US)

LEGAL REPRESENTATIVE:

Grunecker, Kinkeldey, Stockmair & Schwanhauser Anwaltssozietat (100721)
, Maximilianstrasse 58, 80538 Munchen, (DE)

PATENT (CC, No, Kind, Date): EP 644494 A1 950322 (Basic)
EP 644494 B1 000830

APPLICATION (CC, No, Date): EP 94114651 940916;

PRIORITY (CC, No, Date): US 123322 930917

DESIGNATED STATES: DE; FR; GB

INTERNATIONAL PATENT CLASS (V7): G06F-017/30

CITED PATENTS (EP B): EP 546567 A

CITED REFERENCES (EP B):

IBM TECHNICAL DISCLOSURE BULLETIN., vol.36, no.5, May 1993, NEW YORK US
pages 1 - 2 'Collecting Bucket Index Statistical Data with Colocation
Considered'

1988 IEEE SOUTHEASTCON E. HAQ ET AL :: 'New algorithms for balancing
binary search trees' 11 April 1988, KNOXVILLE, US, pages 378 - 382

AFIPS 1985 NATIONAL COMPUTER CONFERENCE, 15 July 1985, CHICAGO, US pages
555 - 566 D. MOTZKIN : 'Database performance optimization';

ABSTRACT EP 644494 A1

A B-tree optimizer mechanism is provided for optimizing a B-tree stored
in a storage device of a computer system. The B-tree optimizer monitors
the type and amount of activity occurring within the B-tree. Based upon
the type and amount of activity, the B-tree optimizer determines whether
the B-tree should be reorganized. When it is determined that the B-tree
should be reorganized, the B-tree optimizer computes an optimal fill
factor for the pages within the B-tree, and reorganizes the B-tree by
filling each page with key values according to the optimal fill factor.
(see image in original document)

ABSTRACT WORD COUNT: 99

NOTE:

Figure number on first page: 2

LEGAL STATUS (Type, Pub Date, Kind, Text):

Grant: 000830 B1 Granted patent

Application: 950322 A1 Published application (A1with Search Report
;A2without Search Report)

Oppn None: 010816 B1 No opposition filed: 20010531

Examination: 951108 A1 Date of filing of request for examination:
950912

Examination: 990428 A1 Date of despatch of first examination report:
990311

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	200035	1129
CLAIMS B	(German)	200035	1010
CLAIMS B	(French)	200035	1153
SPEC B	(English)	200035	4604
Total word count - document A			0
Total word count - document B			7896
Total word count - documents A + B			7896

12/5,K/4 (Item 4 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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00571390

Concurrent access to indexed data files.
Gleichzeitiger Zugriff auf indexierte Dateien.
Acces simultane sur des fichiers de donnees indexees.

PATENT ASSIGNEE:

INTERNATIONAL BUSINESS MACHINES CORPORATION, (200125), Old Orchard Road,
Armonk, N.Y. 10504, (US), (applicant designated states: DE;FR;GB)

INVENTOR:

Scott, Jonathan Andrew, 41 Kelburn Close, Chandlers Ford, Eastleigh,
Hants SO5 2PW, (GB)

LEGAL REPRESENTATIVE:

Moss, Robert Douglas (34141), IBM United Kingdom Limited Intellectual
Property Department Hursley Park, Winchester Hampshire SO21 2JN, (GB)

PATENT (CC, No, Kind, Date): EP 559358 A2 930908 (Basic)
EP 559358 A3 940216

APPLICATION (CC, No, Date): EP 93301289 930222;

PRIORITY (CC, No, Date): GB 9204450 920302

DESIGNATED STATES: DE; FR; GB

INTERNATIONAL PATENT CLASS (V7): G06F-015/403; G06F-015/419;

CITED PATENTS (EP A): EP 303231 A

CITED REFERENCES (EP A):

IBM TECHNICAL DISCLOSURE BULLETIN. vol. 25, no. 1, 1982, NEW YORK US
pages 106 - 109 A. CHAUNDRA & D. LOMET : 'Digital B-trees'
IEEE TRANSACTIONS ON SOFTWARE ENGINEERING vol. 15, no. 6, June 1989,
NEW YORK US pages 696 - 704 M.-Y. LAI ET AL : 'On Distributing JASMIN's
Optimistic Multiversioning Page Manager'
IBM TECHNICAL DISCLOSURE BULLETIN. vol. 32, no. 8A, January 1990, NEW
YORK US pages 222 - 223 'Certification with adaptive time stamp
selection'
ACM TRANSACTIONS ON DATABASE SYSTEMS vol. 6, no. 4, December 1981, NEW
YORK US pages 650 - 670 P. LEHMAN ET AL : 'Efficient Locking for
Concurrent Operations on B-Trees';

ABSTRACT EP 559358 A2

A database management system including an index (10) with parallel read
access for large amounts of keyed information. The index can be
referenced for read-only access (217, 218, 219) by any number of
simultaneous processes (200, 201, 202) in parallel with being updated by
a single process (203), where the read-only access does not involve any
locking or waiting. (see image in original document)

ABSTRACT WORD COUNT: 66

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application: 930908 A2 Published application (A1with Search Report
;A2without Search Report)
Search Report: 940216 A3 Separate publication of the European or
International search report
Examination: 940302 A2 Date of filing of request for examination:
931227
*Assignee: 970205 A2 Applicant (transfer of rights) (change):
International Business Machines Corporation
(200120) Old Orchard Road Armonk, N.Y. 10504
(US) (applicant designated states: DE;FR;GB)
Withdrawal: 980318 A2 Date on which the European patent application
was withdrawn: 980121

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPABF1	571
SPEC A	(English)	EPABF1	4696
Total word count - document A			5267

Total word count - document B 0
Total word count - documents A + B 5267

...SPECIFICATION of Figure 1 with a new entry (25) with a key 210 added to the **tree** . There is no previously unused array element in an existing node (13) which already tests...

...existing node that tests on the particular digit in which it differs from the nearest **existing key** , and so it is necessary to **insert** a new **node** (15). The node is built, initially containing just a reference to the existing node with...

12/5,K/6 (Item 6 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00799831 **Image available**

BUSINESS TRANSACTION PROCESSING SYSTEMS AND METHODS
SYSTEMES ET PROCEDES DE TRAITEMENT DE TRANSACTIONS COMMERCIALES

Patent Applicant/Assignee:

COMPUTER SCIENCES CORPORATION, 9500 Arboretum Blvd., Austin, TX 78759, US
, US (Residence), US (Nationality)

Inventor(s):

BOBBITT Charles P, 6606 Mapleshade Lane, Dallas, TX 78252, US,
DOUGHTY Steven G, 2332 Brennan Drive, Plano, TX 75075-6618, US,
SHAW Robert Jay, 4312 Seabury, Dallas, TX 78287, US,

Legal Representative:

MEYERTONS Eric B (agent), Conley, Rose & Tayon, P.C., P.O. Box 398,
Austin, TX 78767-0398, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200133398 A2 20010510 (WO 0133398)

Application: WO 2000US29978 20001030 (PCT/WO US0029978)

Priority Application: US 99162412 19991029; US 99162411 19991029; US
99162602 19991029; US 99162509 19991029; US 99162708 19991029; US
99162567 19991029; US 99162603 19991029; US 2000699036 20001027; US
2000699015 20001027; US 2000699054 20001027; US 2000699038 20001027; US
2000699021 20001027; US 2000699058 20001027; US 2000699056 20001027; US
2000699037 20001027

Designated States:

(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE
ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT
LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM
TR TT TZ UA UG UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class (v7): G06F-017/60

Publication Language: English

Filing Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 77244

English Abstract

French Abstract

L'invention concerne un systeme, un procede, et un support destines a la configuration de relations de traitement au sein des entites d'une organisation de services financiers (FSO); un systeme, un procede, et un support destines a la configuration de logiciels d'application d'une organisation de services financiers (FSO); un systeme et un procede destines a l'identification et l'execution selectives d'une tache de traitement specifique pour un ou plusieurs dossiers contenus dans le ou les ensembles de donnees d'une organisation de services financiers (FSO); un systeme et un procede destines a la selection dynamique d'un identificateur de base de donnees, associes a une base de donnees et fondees sur les besoins des programmes d'application dans un systeme de traitement de transactions commerciales d'une organisation de services financiers (FSO); un systeme, un procede, et un support destines a localiser des valeurs de parametre de traitement dans un systeme informatique d'une organisation de services financiers (FSO) utilisant des definitions cles predeterminees, des valeurs cles, et des masques de recherche de valeurs cles; un systeme et un procede destines a configurer

des definitions cles, des valeurs cles, et des masques de recherche de valeurs cles, pour la localisation de valeurs de parametres de traitement dans un systeme informatique d'une organisation de services financiers (FSO).

Legal Status (Type, Date, Text)

Publication 20010510 A2 Without international search report and to be republished upon receipt of that report.
Examination 20011018 Request for preliminary examination prior to end of 19th month from priority date
Declaration 20020912 Late publication under Article 17.2a
Republication 20020912 A2 With declaration under Article 17(2)(a); without abstract; title not checked by the International Searching Authority.

Fulltext Availability:

Detailed Description

Detailed Description

... relationship structure. A report record definition, used in the generation of reports, may be a **data structure** that defines the format of report records in an FSO system. In one embodiment, a report record definition may be created by selecting a data element included in a **node** and by **adding** the selected data element to the break **key** field **included** 1 5 in the report record definition. In one embodiment, a report generation program may...

16/5,K/2 (Item 2 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

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01954980

Method for the determination of a container track information

Verfahren zur Bestimmung einer Behalterspurninformation

Procede pour determiner l'information d'un conteneur de piste

PATENT ASSIGNEE:

APPLE COMPUTER, INC., (1211956), 1 Infinite Loop, MS3-PAT, Cupertino, CA
95014, (US), (Applicant designated States: all)

INVENTOR:

HODDIE, J. Peter, 910 Greenview 2, 94040, MOUNTAIN VIEW, (US)

ALLEN, Sean D., 22.563 Woodridge Court, 95014, CUPERTINO, (US)

LEGAL REPRESENTATIVE:

Tetaz, Franck Claude Edouard et al (78178), Cabinet Regimbeau 129, rue

Servient, 69326 Lyon Cedex 03, (FR)

PATENT (CC, No, Kind, Date): EP 1575295 A2 050914 (Basic)

EP 1575295 A3 051026

APPLICATION (CC, No, Date): EP 2005103203 960502;

PRIORITY (CC, No, Date): US 437089 950505

DESIGNATED STATES: DE; FR; GB

RELATED PARENT NUMBER(S) - PN (AN):

EP 1152323 (EP 2001114460)

EP 769167 (EP 2096915479)

INTERNATIONAL PATENT CLASS (V7): **G06F-003/033** ; H04N-007/24

ABSTRACT EP 1575295 A2

A method for determining information in a container track corresponding to a particular time, wherein the container track includes samples, comprises:

- (a) adding a first region of a first sample to a merged sample;
- (b) identifying a second region of a second sample succeeding the first sample;
- (c) adding the second region to the merged sample, provided the first region does not correspond to the second region, otherwise replacing the first region with the second region; and
- (d) providing the merged sample as the information corresponding to the particular time.

ABSTRACT WORD COUNT: 95

NOTE:

Figure number on first page: 7

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application: 050914 A2 Published application without search report

Change: 051019 A2 Title of invention (English) changed: 20050827

Change: 051026 A2 International Patent Classification changed:
20050909

Search Report: 051026 A3 Separate publication of the search report

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
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CLAIMS A	(English)	200537	259
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SPEC A	(English)	200537	10788
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Total word count - document A	11047
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Total word count - document B	0
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Total word count - documents A + B	11047
------------------------------------	-------

INTERNATIONAL PATENT CLASS (V7): **G06F-003/033** ...

...SPECIFICATION checks whether the key sample has a node of the same type, step 725. If **there** are no nodes of the same type in the **key** sample, then the **present** invention **adds** the **node** and all of its children to the merged sample, step 727. The present invention then...

...replaced by the node in the override sample, step 730. That is, the
override sample **node** is **added** to the merged sample rather than the
key sample node. The **present** invention then checks whether **there** are
any more lower level nodes which have not been selected (or added to the

16/5,K/5 (Item 5 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

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00518431

A computer system for retrieval of information.

Rechnersystem zur Informationsauffindung.

Systeme d'ordinateur pour le recouvrement d'information.

PATENT ASSIGNEE:

International Business Machines Corporation, (200120), Old Orchard Road,
Armonk, N.Y. 10504, (US), (applicant designated states: DE;FR;GB)

INVENTOR:

Fischer, Peter, An der Kamenade 4b, W-2800 Bremen, (DE)

Keck, Uwe, Tuttlinger Strasse 12, W-7250 Leonberg, (DE)

LEGAL REPRESENTATIVE:

Monig, Anton, Dipl.-Ing. (8591), IBM Deutschland Informationssysteme

GmbH, Patentwesen und Urheberrecht, D-70548 Stuttgart, (DE)

PATENT (CC, No, Kind, Date): EP 567668 A1 931103 (Basic)

APPLICATION (CC, No, Date): EP 92107142 920427;

PRIORITY (CC, No, Date): EP 92107142 920427

DESIGNATED STATES: DE; FR; GB

INTERNATIONAL PATENT CLASS (V7): **G06F-015/419**

CITED REFERENCES (EP A):

ACTA INFORMATICA vol. 1, 1972, pages 173 - 179 R. BAYER AND E MC.CREIGHT

: 'Organization and Maintenance of Large Ordered Indexes'

COMPUTER SURVEYS vol. 11, no. 2, June 1979, pages 121 - 137 D. COMER :

'The Ubiquitous B-Tree'

IBM TECHNICAL DISCLOSURE BULLETIN. vol. 20, no. 2, July 1977, NEW YORK US

pages 846 - 848 A. ROSENBERG AND L. SNYDER : 'Construction of

minimal-comparison 2,3-trees';

ABSTRACT EP 567668 A1

The invention concerns a computer system for retrieval of information
(a(sub(i))), wherein a tree (T, T*) is used to store entries of an
index. An entry comprises a key (x(sub(i))) having some information (a(
sub(i))) assigned thereto. The nodes of the tree (T, T*) may either be
empty or comprise up to 2k entries, where k is a natural number. (see
image in original document)

ABSTRACT WORD COUNT: 69

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application: 931103 A1 Published application (A1with Search Report
;A2without Search Report)

Examination: 940302 A1 Date of filing of request for examination:
931227

Withdrawal: 980429 A1 Date on which the European patent application
was deemed to be withdrawn: 980103

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPABF1	803
SPEC A	(English)	EPABF1	5634
Total word count - document A			6437
Total word count - document B			0
Total word count - documents A + B			6437

INTERNATIONAL PATENT CLASS (V7): **G06F-015/419**

...SPECIFICATION node V is defined. The father node V(b+1) comprises a
pointer to the **present** father **node** and to said **additional node** .
The further **key** is entered on the father node V(b+1).

If it is decided in step...2) to x(sub(x+1)), respectively. If the
node i is completely filled with **keys** x(sub 1) to x(sub(2k)) and
there is a request to store a further **key** x(sub(2k+1)), this

...

necessitates the definition of an **additional node** $i+1$ in which the further key $x(\text{sub}(2k+1))$ is entered. Further the...

...

...

...

16/5,K/8 (Item 8 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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01049134 **Image available**

SEARCH-LIMITED LEAST-COST ROUTING SYSTEM
SYSTEME D'ACHEMINEMENT A MOINDRE COUT LIMITANT LES RECHERCHES

Patent Applicant/Assignee:

WAVEMARKET INC, 5858 Horton, Suite 250, Emeryville, CA 94608, US, US
(Residence), US (Nationality), (For all designated states except: US)

Patent Applicant/Inventor:

GUTMAN Ronald D, 1580 Valley Crest Drive, San Jose, CA 95131, US, US
(Residence), US (Nationality), (Designated only for: US)

KLEIN Phillip N, 532 Elmgrove Ave, Providence, RI 02906, US, US
(Residence), -- (Nationality), (Designated only for: US)

MYERS Jesse B, 934 Divisadero Street, San Francisco, CA 94115, US, US
(Residence), US (Nationality), (Designated only for: US)

Legal Representative:

SUOMINEN Edwin (agent), Law Offices of Louis J. Hoffman, 14614 North
Kierland Boulevard, Suite 300, Scottsdale, AR 85254, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200379155 A1 20030925 (WO 0379155)

Application: WO 2003US7781 20030312 (PCT/WO US0307781)

Priority Application: US 2002363322 20020312

Designated States:

(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ
EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR
LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG
SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT RO SE
SI SK TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class (v7): **G06F**

Publication Language: English

Filing Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 17469

English Abstract

A method according to various aspects of the present invention computes a desirable path from a source node to a destination node. In the method, a network data set (210) is provided that includes indicia of a plurality of nodes and a plurality of primary arcs that connect some of the nodes. A preliminary routing data (230) set is further provided, which includes indicia of least-cost paths between each node of a primary arc. Responsive to input of a specified source and destination node of the plurality of nodes, the method retrieves from the preliminary routing data set a plurality of precomputed desirable paths that concatenate to form a desirable path between the source and destination node.

French Abstract

Un procede selon divers aspects de la presente invention calcule un trajet d'acheminement desirable partant d'un noeud source et aboutissant a un noeud de destination. Dans le procede un ensemble de donnees de reseau (210) qui est fourni comporte des reperes d'une pluralite de noeuds et une pluralite d'arcs primaire qui connectent certains des noeuds. Un ensemble de donnees (230) d'acheminement preliminaire, egalement fourni, comporte des reperes de trajets d'acheminement a moindre cout entre chaque noeud d'un arc primaire. En reaction a l'entree

d'une source specifiee et d'un noeud de destination d'une pluralite de noeuds, le procede retrouve, dans un ensemble de donnees d'acheminement preliminaire une pluralite de trajets souhaitables prealablement calcules qui, par concatenation, forment un trajet d'acheminement entre la source et le noeud de destination.

Legal Status (Type, Date, Text)

Publication 20030925 A1 With international search report.

Main International Patent Class (v7): **G06F**

Fulltext Availability:

Detailed Description

Detailed Description

```
... downstream neighbor nodes and arcs to them
foreach j [split $toList "'"] (
  insert $j; $g arc insert $ node $j "$ node $j"
41
... then setting arc keys
if @ [info exists text] ) @ unset text
foreach i [lsort [$9 arcs]]
append text "
n$i"
foreach i 10...
```

16/5,K/9 (Item 9 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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01029425 **Image available**

ENHANCED MULTIWAY RADIX TREE
ARBRE A BASE MULTIVOIE AMELIORE

Patent Applicant/Assignee:

INTEL CORPORATION, 2200 Mission College Boulevard, Santa Clara, CA 95052,
US, US (Residence), US (Nationality)

Inventor(s):

NEHRU Archana, 1517 Armacost Avenue, #201, Los Angeles, CA 90025, US,
PAUL Manoj, House #169, 34rd main, 11th Cross, Hig Colony, Rmv II Stage,
Bangalore 560094, Karnataka, IN,

Legal Representative:

MALLIE Michael J (et al) (agent), Blakely Sokoloff Taylor & Zafman, 7th
Floor, 12400 Wilshire Boulevard, Los Angeles, CA 90025, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200358512 A2-A3 20030717 (WO 0358512)

Application: WO 2003US231 20030103 (PCT/WO US03000231)

Priority Application: US 200243764 20020108

Designated States:

(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ
EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR
LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG
SK SL TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW

(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT SE SI
SK TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class (v7): **G06F-017/30**

Publication Language: English

Filing Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 9071

English Abstract

A method and apparatus for assigning a logical level number to a symbol
in a key comprising a string of symbols, and storing an entry for the key
in a level of nodes in a multiway radix tree based at least in part on
the logical level number instead of on a path between nodes representing
every symbol in the key.

French Abstract

L'invention concerne un procede et un appareil permettant d'attribuer un
nombre de niveau logique a un symbole contenu dans une cle constituee
d'une serie de symboles. Les procede et appareil selon l'invention
permettent egalement de stocker une entree pour ladite cle dans un niveau
de noeuds d'un arbre a base multivoie, ledit arbre etant base au moins en
partie sur ledit nombre de niveau logique, au lieu d'etre base sur un
trajet entre des noeuds representant chaque symbole de la cle.

Legal Status (Type, Date, Text)

Publication 20030717 A2 Without international search report and to be
republished upon receipt of that report.

Examination 20031009 Request for preliminary examination prior to end of
19th month from priority date

Search Rpt 20040429 Late publication of international search report

Republication 20040429 A3 With international search report.

Republication 20040429 A3 Before the expiration of the time limit for

amending the claims and to be republished in the
event of the receipt of amendments.

Main International Patent Class (v7): **G06F-017/30**

Fulltext Availability:

Detailed Description

Detailed Description

... a logical level number corresponding to the last symbol in the key
and/or the **key** length, then a new level of **nodes** is **inserted**
between **existing** levels, an entry for the **key** is stored in a node
corresponding to the last symbol in the key, and a...

25/5,K/1 (Item 1 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2006 European Patent Office. All rts. reserv.

01538577
Network usage analysis method and system using dynamic statistical data distribution
Verfahren und System zur Analyse der Netzwerkauslastung mit dynamischer Verteilung von statistischen Daten
Procede et systeme d'analyse d'utilisation d'un reseau, comportant la distribution dynamique de donnees statistiques

PATENT ASSIGNEE:

Hewlett-Packard Company, (206033), 3000 Hanover Street, M/S 20BN, Palo Alto, CA 94304, (US), (Applicant designated States: all)

INVENTOR:

Rhodes, N. Lee, 1165 Diamond Court, Los Altos, CA 94024, (US)

LEGAL REPRESENTATIVE:

Tollett, Ian et al (86292), Williams Powell 4 St. Paul's Churchyard, London EC4M 8AY, (GB)

PATENT (CC, No, Kind, Date): EP 1282270 A1 030205 (Basic)

APPLICATION (CC, No, Date): EP 2002255296 020730;

PRIORITY (CC, No, Date): US 919149 010731

DESIGNATED STATES: DE; FR; GB

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS (V7): H04L-012/26; H04L-012/24

ABSTRACT EP 1282270 A1

A network usage analysis system and method (20) having a dynamic statistical data distribution system (320) and method. In one embodiment, the present invention provides a method for substantially real-time analyzing of a stream of data (324). The method includes receiving the stream of data (324). A data distribution is determined (300) representative of the stream of data, including creating data bins (306) having exponentially increasing sizes (312), and allocating a statistical representation of the data in the data bins. The data distribution (300) is used to analyze the stream of data.

ABSTRACT WORD COUNT: 93

NOTE:

Figure number on first page: 3

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application: 030205 A1 Published application with search report
Examination: 030716 A1 Date of request for examination: 20030519
Examination: 050427 A1 Date of dispatch of the first examination report: 20050311

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200306	481
SPEC A	(English)	200306	5565
Total word count - document A			6046
Total word count - document B			0
Total word count - documents A + B			6046

...SPECIFICATION Figure 8 is a diagram illustrating one exemplary embodiment of a method of recording usage **data** events in a **tree structure** according to the present invention. The method is shown generally at 400. At 402, the incoming value **v** of the record event is received. At 404, the bin **key** **k** is computed from the data event value. The bin associated with the bin **key** **k** is located at 406. At 408, if the bin exists, the statistics are updated at the bin, indicated at 410. If a bin or **node** does not **exist** that corresponds to the computed bin **key** **k**, a bin is added to the **tree** structure indicated at 412. A maximum size for the **tree** structure may be optionally predefined. At 414, if

the size of the **tree** structure as a result of **adding** the bin or **node** is not greater than the predetermined maximum size the statistics are updated at that node. At 414, if the size of the **tree** structure is greater than the predetermined maximum size optionally, the statistics of the lowest two...

25/5,K/3 (Item 3 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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01365537

INFORMATION PROCESSING SYSTEM AND METHOD
VERFAHREN UND VORRICHTUNG ZUR INFORMATIONSVERRARBEITUNG
SYSTEME ET PROCEDE DE TRAITEMENT DES INFORMATIONS

PATENT ASSIGNEE:

Sony Corporation, (214028), 7-35, Kitashinagawa 6-chome, Shinagawa-ku,
Tokyo 141-0001, (JP), (Applicant designated States: all)

INVENTOR:

ISHIGURO, Ryuji, c/o SONY CORPORATION, 7-35, Kitashinagawa 6-chome,
Shinagawa-ku, Tokyo 141-0001, (JP)
OSAWA, Yoshitomo, c/o SONY CORPORATION, 7-35, Kitashinagawa 6-chome,
Shinagawa-ku, Tokyo 141-0001, (JP)
OISHI, Tateo, c/o SONY CORPORATION, 7-35, Kitashinagawa 6-chome,
Shinagawa-ku, Tokyo 141-0001, (JP)
ASANO, Tomoyuki, c/o SONY CORPORATION, 7-35, Kitashinagawa 6-chome,
Shinagawa-ku, Tokyo 141-0001, (JP)
MITSUZAWA, Atsushi, c/o SONY CORPORATION, 7-35, Kitashinagawa 6-chome,
Shinagawa-ku, Tokyo 141-0001, (JP)

LEGAL REPRESENTATIVE:

Pratt, Richard Wilson et al (46458), D. Young & Co, 21 New Fetter Lane,
London EC4A 1DA, (GB)

PATENT (CC, No, Kind, Date): EP 1185021 A1 020306 (Basic)
WO 200178299 011018

APPLICATION (CC, No, Date): EP 2001919777 010404; WO 2001JP2929 010404

PRIORITY (CC, No, Date): JP 2000105329 000406; JP 2000179692 000615; JP
2000317803 001018

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;
LU; MC; NL; PT; SE; TR

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS (V7): H04L-009/00; G06F-017/60; G11B-020/10;
G11B-020/12

CITED PATENTS (WO A): XP 2941560 ; XP 2941561 ; XP 2941562

CITED REFERENCES (WO A):

JP 11187013 A
US 6049878 A
US 5748736 A
WO 103364 A1
WO 103365 A1

'The versakey framework: versatile group key management' IEEE JOURNAL ON
SELECTED AREAS IN COMMUNICATIONS vol. 17, no. 9, September 1999, pages
1614 - 1631, XP002941560

'Secure group communications using key graphs' PROCEEDINGS OF ACM
SIGCOMM'98, Online 02 September 1998, pages 68 - 79, XP002941561
Retrieved from the Internet:

<URL:http://www.acm.org/sigcomm/sigcomm98/t p/technical.html>

'Key management for secure internet multicast using boolean function
minimization techniques' PROCEEDINGS OF INFOCOM'99, Online vol. 2, 24
March 1999, pages 689 - 698, XP002941562 Retrieved from the Internet:

<URL:http://www.ieee-infocom.org/1999/>;

ABSTRACT EP 1185021 A1

The enabling key block (EKB) used in an encrypted key distributing
constitution of a tree structure is generated by reconstructing a
simplified 2-branch or multi-branch type tree with a terminal node or
leaf which can decrypt as the lowest stage, and on the basis of only the
key corresponding to a node or a leaf of the reconstructed hierarchical
tree. Further, a tag as discrimination data at a tree position of an
encrypted key stored in EKB is stored. The tag not only discriminates a
position but stores data for judging presence of encrypted key
data within EKB. A considerable reduction in data quantity is realized,
and decrypting process, in a device is also simplified. Thus, an

information processing system and method capable of reducing data quantity of an enabling key block (EKB) used in an encrypted key constitution of a tree structure is realized.

ABSTRACT WORD COUNT: 145

NOTE:

Figure number on first page: 26AB

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application: 011212 A1 International application. (Art. 158(1))
Application: 011212 A1 International application entering European phase
Application: 020306 A1 Published application with search report
Examination: 020306 A1 Date of request for examination: 20011221
Search Report: 030507 A1 Date of drawing up and dispatch of supplementary:search report 20030320
Change: 030507 A1 International Patent Classification changed: 20030314
Change: 030507 A1 International Patent Classification changed: 20030314
Examination: 041013 A1 Date of dispatch of the first examination report: 20040826

LANGUAGE (Publication,Procedural,Application): English; English; Japanese
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200210	2944
SPEC A	(English).	200210	22175
Total word count - document A			25119
Total word count - document B			0
Total word count - documents A + B			25119

...SPECIFICATION added entity. By being so set, the newly added entity is enabled under the whole **tree** constitution.

FIGS. 34A and 34B show an example of a renewal EKB produced by the...

...an example of a sub-EKB produced by the host entity when a new entity **added** terminal **node** (**node** 100) 3303 is applied to the newly added entity, in the constitution shown in FIG. 34A which has a terminal node (node 000). 3301 which has been effectively **present** and a terminal **node** (**node** 001) node 3302.

The sub-EKB has the constitution as shown in FIG. 34B. **There** are a host **node** **key** encrypted by a terminal **node** which has been effectively **present** , a further host **node** **key** encrypted by the host node key, ... and a sub-root key. Similarly to FIG. 34B...

25/5,K/4 . . . (Item 4 from file: 348).
DIALOG(R)File 348:EUROPEAN PATENTS
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01086103

FAST STRING SEARCHING AND INDEXING
SCHNELLES ZEICHENKETTENSUCHEN UND -INDIZIEREN
RECHERCHE ET INDEXATION RAPIDES DE CHAINES DE CARACTERES

PATENT ASSIGNEE:

SAP Aktiengesellschaft, (2635751), Neurottstrasse 16, 69190 Walldorf,
(DE), (Proprietor designated states: all)

INVENTOR:

BRAUN, Bernhard, Jahnweg 6, D-69231 Rauenberg, (DE)

LEGAL REPRESENTATIVE:

Jany, Peter, Dr. (79031), Dr. H.-P. Pfeifer Dr. P. Jany Patentanwälte
Beiertheimer Allee 19, 76137 Karlsruhe, (DE)

PATENT (CC, No, Kind, Date): EP 1066570 A1 010110 (Basic)
EP 1066570 B1 031029
WO 99044151 990902

APPLICATION (CC, No, Date): EP 99908946 990225; WO 99EP1210 990225

PRIORITY (CC, No, Date): US 31285 980226

DESIGNATED STATES: AT; BE; CH; DE; FR; GB; IE; IT; LI; LU

INTERNATIONAL PATENT CLASS (V7): G06F-017/30

CITED PATENTS (EP B): EP 419889 A; WO 96/00945 A

CITED PATENTS (WO A): XP 297892

CITED REFERENCES (EP B):

DUNDAS III J A: "IMPLEMENTING DYNAMIC MINIMAL-PREFIX TRIES" SOFTWARE
PRACTICE & EXPERIENCE, vol. 21, no. 10, 1 October 1991, pages
1027-1040, XP000297892;

CITED REFERENCES (WO A):

DUNDAS III J A: "IMPLEMENTING DYNAMIC MINIMAL-PREFIX TRIES" SOFTWARE
PRACTICE & EXPERIENCE, vol. 21, no. 10, 1 October 1991, pages
1027-1040, XP000297892;

NOTE:

No A-document published by EPO

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application: 010110 A1 Published application with search report
Application: 991103 A1 International application. (Art. 158(1))
Lapse: 050608 B1 Date of lapse of European Patent in a

contracting state (Country, date): AT
20031029, BE 20031029, CH 20031029, LI
20031029, LU 20040225,

Oppn None: 041020 B1 No opposition filed: 20040730

Lapse: 040728 B1 Date of lapse of European Patent in a
contracting state (Country, date): AT
20031029,

Lapse: 040728 B1 Date of lapse of European Patent in a
contracting state (Country, date): AT
20031029,

Examination: 020626 A1 Date of dispatch of the first examination
report: 20020514

Examination: 010110 A1 Date of request for examination: 20000417

Grant: 031029 B1 Granted patent

Lapse: 040811 B1 Date of lapse of European Patent in a
contracting state (Country, date): AT
20031029, CH 20031029, LI 20031029,

Lapse: 040811 B1 Date of lapse of European Patent in a
contracting state (Country, date): AT
20031029, CH 20031029, LI 20031029,

Lapse: 041222 B1 Date of lapse of European Patent in a
contracting state (Country, date): AT
20031029, BE 20031029, CH 20031029, LI
20031029,

Application: 991103 A1 International application entering European
phase

LANGUAGE (Publication,Procedural,Application):. English;. English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	200344	1616
CLAIMS B	(German)	200344	1624
CLAIMS B	(French)	200344	1861
SPEC B	(English)	200344	11304
Total word count - document A			0
Total word count - document B			16405
Total word count - documents A + B			16405

...SPECIFICATION the backtracking stack (namely, nodes 1070 and 1080) may be discarded, thereby pruning the index **tree** .

The only remaining node still in the backtracking stack, node 1040, is popped. This is...

...and FI seeks the first non-wildcard character position <j> where the search **key** differs from the **key** string associated with node 1040. However, "*b*cd" and "d*c**" match, so the **key** entry associated with **node** 1040 is **added** to the result buffer. **There** are no more **nodes** to be considered, and the result stack is returned.

In Fig. 11 an advantageous use...

25/5,K/5 (Item 5 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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00879910

INFORMATION PROCESSOR, FILE NAME CHANGING METHOD AND RECORDING MEDIUM ON
WHICH FILE NAME CHANGING PROGRAM IS STORED
INFORMATIONSPROZESSOR, VERÄNDERUNGSVERFAHREN FÜR DATEINAMEN UND
AUFZEICHNUNGSMEDIUM AUF DEM EIN PROGRAMM ZUR VERÄNDERUNG VON DATEINAMEN
GESPEICHERT IST
PROCESSEUR D'INFORMATIONS, PROCÉDE DE MODIFICATION DE NOMS DE FICHIERS, ET
SUPPORT D'ENREGISTREMENT SUR LEQUEL UN PROGRAMME DE CHANGEMENT DE NOM
DE FICHIER EST

PATENT ASSIGNEE:

SONY CORPORATION, (214021), 7-35 Kitashinagawa 6-chome Shinagawa-ku,
Tokyo 141, (JP), (applicant designated states: DE;FR;GB)

INVENTOR:

INOKUCHI, Tatsuya, Sony Corporation 7-35, Kitashinagawa 6-chome,
Shinagawa-ku Tokyo 141, (JP)

UDAGAWA, Osamu, Sony Corporation 7-35, Kitashinagawa 6-chome,
Shinagawa-ku Tokyo 141, (JP)

KANEKO, Yasuyoshi, Sony Corporation 7-35, Kitashinagawa 6-chome,
Shinagawa-ku Tokyo 141, (JP)

TAIRA, Kazuhisa, Sony Corporation 7-35, Kitashinagawa 6-chome,
Shinagawa-ku Tokyo 141, (JP)

LEGAL REPRESENTATIVE:

Melzer, Wolfgang, Dipl.-Ing. (8278), Patentanwälte Mitscherlich &
Partner, Sonnenstrasse 33, 80331 München, (DE)

PATENT (CC, No, Kind, Date): EP 821309 A1 980128 (Basic)
WO 9729426 970814

APPLICATION (CC, No, Date): EP 97902622 970207; WO 97JP321 970207

PRIORITY (CC, No, Date): JP 9648211 960209

DESIGNATED STATES: DE; FR; GB

INTERNATIONAL PATENT CLASS (V7): G06F-012/00;

ABSTRACT EP 821309 A1

An information processing apparatus, a file name conversion method and
a recording medium recorded a program of the file name conversion method
thereon, capable of accessing file names recorded on a recording medium
in conformity of respective specifications of a plurality of operating
systems.

In an information processing apparatus for accessing a file recorded on
a recording medium in conformity to specifications defined by a plurality
of operating systems, means for converting a first file name based on the
specifications of an operating system used for file creation/file name
change to a second file name based on the specifications of an operating
system used for accessing the file is provided for all of the plurality
of operating systems, thereby file accesses among a plurality of
different plurality of operating systems can be realized.

ABSTRACT WORD COUNT: 134

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application: 971105 A1 International application (Art. 158(1))

Application: 980128 A1 Published application (A1with Search Report
;A2without Search Report)

Examination: 980304 A1 Date of filing of request for examination:
971215

LANGUAGE (Publication,Procedural,Application): English; English; Japanese

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	9805	2342
SPEC A	(English)	9805	20484
Total word count - document A			22826

Total word count - document B . 0
Total word count - documents A + B 22826

...SPECIFICATION in the node is recorded in the Number of Records.

Furthermore, the Directory B Star **Tree** Leaf Node h is the node of the B Star **Tree** for housing the file name, the sequence **key** SQK, a correspondence relation between the directory name and the directory number, and attribute information...

...21. In the "Node Number" in this leaf node, the "Node Number" of the leaf **node added** with (0x80000000) is housed. The "Number of Records" shows the number of directory records housed...

...and "Next Node Number" show the Node Number of the leaf node having the least **key** and the leaf node having the largest **key** . When no target **node exists** , (0xffffffff) is recorded. In the Total Size of Record, the total byte number of the...

25/5,K/6 (Item 6 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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00859290

INFORMATION PROCESSING APPARATUS AND METHOD
INFORMATIONSVERARBEITUNGSVORRICHTUNG UND VERFAHREN
APPAREIL ET PROCEDE DE TRAITEMENT D'INFORMATIONS

PATENT ASSIGNEE:

SONY CORPORATION, (214021), 7-35 Kitashinagawa 6-chome Shinagawa-ku,
Tokyo 141, (JP), (applicant designated states: DE;FR;GB)

INVENTOR:

INOKUCHI, Tatsuya, Sony Corporation, 7-35, Kitashinagawa 6-chome,
Shinagawa-ku, ToKyo 141, (JP)

UDAGAWA, Osamu, Sony Corporation, 7-35, Kitashinagawa 6-chome,
Shinagawa-ku, Tokyo 141, (JP)

KANEKO, Yasuyoshi, Sony Coporation, 7-35, Kitashinagawa 6-chome,
Shinagawa-ku, Tokyo 141, (JP)

LEGAL REPRESENTATIVE:

Melzer, Wolfgang, Dipl.-Ing. (8278), Patentanwalte Mitscherlich &
Partner, Sonnenstrasse 33, 80331 Munchen, (DE)

PATENT (CC, No, Kind, Date): EP 803815 A1 971029 (Basic)
WO 9717657 970515

APPLICATION (CC, No, Date): EP 96935512 961031; WO 96JP3195 961031

PRIORITY (CC, No, Date): JP 95317416 951110; JP 95317256 951110; JP
95317473 951110; JP 96257611 960905

DESIGNATED STATES: DE; FR; GB

INTERNATIONAL PATENT CLASS (V7): G06F-012/00; G06F-003/06; G11B-027/00;

ABSTRACT EP 803815 A1

An information processor and a method of information processing wherein
a write once type disc can be used as a rewritable recording medium.

There can be realized an address control mechanism wherein even if the
physical recording position is changed, the logical address of the same
block is not changed by controlling the physical recording position on
the recording medium on an imaginary address space in correspondence to
the logical address. Thus the write once type recording medium can be
realized as a rewritable recording medium.

ABSTRACT WORD COUNT: 87

LEGAL STATUS (Type, Pub Date, Kind, Text):

Withdrawal: 020508 A1 Date of withdrawal of application: 20020306

Application: 970827 A1 International application (Art. 158(1))

Application: 971029 A1 Published application (A1with Search Report
;A2without Search Report)

Examination: 971112 A1 Date of filing of request for examination:
970916

LANGUAGE (Publication,Procedural,Application): English; English; Japanese

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	9710W4	835
SPEC A	(English)	9710W4	12968
Total word count - document A			13803
Total word count - document B			0
Total word count - documents A + B			13803

...SPECIFICATION in the node is recorded in the Number of Records.

Furthermore, the Directory B Star **Tree** Leaf Node h is the node of the
B Star **Tree** for housing the file name, the sequence **key** SQK, a
correspondence relation between the directory name and the directory
number, and attribute information...

...21. In the "Node Number" in this leaf node, the "Node Number" of the
leaf **node added** with (0x80000000) is housed. The "Number of Records"

shows the number of directory records housed...

...and "Next Node Number" show the Node Number of the leaf node having the least **key** and the leaf node having the largest **key** . When no target **node exists** , (0xffffffff) is recorded. In the Total Size of Record, the total byte number of the...

25/5,K/7 (Item 7 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

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00521938

System and method for efficiently indexing and storing large database with high-data insertion frequency.

Verfahren und Gerat um eine grosse Datenbank mit hoher Dateneinlesefrequenz rationell zu indexieren und zu speichern.

Procede et dispositif pour indexer et stocker une grande base de donnees avec un haute frequence d'insertion d'une facon effective.

PATENT ASSIGNEE:

DIGITAL EQUIPMENT CORPORATION, (313080), 146 Main Street, Maynard, MA 01754, (US), (applicant designated states: DE;FR;GB;IT)

INVENTOR:

Chi-Man Cheng, Edward, 2650 Meath Drive, San Francisco CA 94080, (US)

Gawlick, Dieter, 757 Paul Avenue, Palo Alto CA 94306, (US)

O'Neil, Patrick E., 7 Whittier Road, Lexington, MA 02173, (US)

LEGAL REPRESENTATIVE:

Charig, Raymond Julian (79692), Eric Potter Clarkson, Park View House, 58 The Ropewalk, Nottingham NG1 5DD, (GB)

PATENT (CC, No, Kind, Date): EP 522363 A2 930113 (Basic)

EP 522363 A3 931201

APPLICATION (CC, No, Date): EP 92110758 920626;

PRIORITY (CC, No, Date): US 722007 910627

DESIGNATED STATES: DE; FR; GB; IT

INTERNATIONAL PATENT CLASS (V7): G06F-015/419;

CITED REFERENCES (EP A):

PATENT ABSTRACTS OF JAPAN vol. 013, no. 337 (P-906)28 July 1989

PATENT ABSTRACTS OF JAPAN vol. 014, no. 059 (P-1000)2 February 1990

PROCEEDINGS OF THE 11TH ACM SYMPOSIUM ON OPERATING SYSTEMS PRINCIPLES vol. 21, no. 5, 11 November 1987, AUSTIN, TEXAS, USA pages 139 - 148

FINLAYSON R.S., CHERITON D.R. 'Log Files: An Extended File Service Exploiting Write-Once Storage';

ABSTRACT EP 522363 A2

A database index file is maintained by a computer system having primary random access memory and secondary memory. A record for each item added to the database is stored in a sequential file in secondary memory (disk storage) and an indexed pointer to the new record is stored in a small B-tree stored in primary random access memory. The full index file for the database is a second, large B-tree stored in secondary memory. Leaf-nodes of the full index file are stored in indexed order. Periodically, a portion of the memory resident small B-tree is merged with a corresponding portion of the large B-tree by selecting a range of index values and retrieving from secondary memory all indexed pointers in the selected range of index values. The indexed pointers in the first B-tree in the selected range of index values are merged into the retrieved records, the resulting merged set of indexed pointers are stored in secondary memory in indexed order in a contiguous area of secondary memory. As a result, the indexed pointers for newly added database records are written to secondary memory in batches, thereby accessing secondary memory very efficiently. (see image in original document)

ABSTRACT WORD COUNT: 199

LEGAL STATUS (Type, Pub Date, Kind, Text):

Withdrawal: 000705 A2 Date application deemed withdrawn: 20000104

Application: 930113 A2 Published application (A1with Search Report ;A2without Search Report)

Search Report: 931201 A3 Separate publication of the European or International search report

Examination: 940803 A2 Date of filing of request for examination: 940531

Change: 991013 A2 Legal representative(s) changed 19990825
Examination: 991201 A2 Date of dispatch of the first examination
report: 19991013

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPABF1	3105
SPEC A	(English)	EPABF1	6572
Total word count - document A			9677
Total word count - document B			0
Total word count - documents A + B			9677

...SPECIFICATION the database that is being indexed.

The procedures for adding and deleting items from the **tree** 200 of Figure 2 are well known to those skilled in the art. Basically, the proper place for inserting a new entry is determined by tracing down the **tree**, following the nodes with **key** value ranges corresponding to the new entry, until the proper leaf node is found. If the leaf node has room for the new entry, it is simply **added** to that leaf **node**. If the leaf node is full, entries are either shifted among the **existing** leaf **nodes** to make room for the new entry or a new leaf node may be created. When necessary, the **key** value intervals stored in the corresponding parent nodes are adjusted to keep track to the contents of the **tree** nodes.

Deleting entries is straightforward. The entry is deleted from its leaf node. Deletion may cause the number of nodes in the **tree** to shrink, since there is a minimum allowed number of entries for each node.

As...

25/5,K/8 (Item 8 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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00419199

Prefix search tree with partial key branching.

Präfix-Suchbaum mit Teilschlusselfverzweigung.

Arbre de recherche prefix a branchement sur des cles partielles.

PATENT ASSIGNEE:

Bull HN Information Systems Inc., (405375), Corporation Trust Center 1209
Orange Street, Wilmington Delaware, (US), (applicant designated states:
DE;ES;FR;GB;IT)

INVENTOR:

Nickel, Steven P., 50 Reservoir Street, Cherry Valley, Mass. 01611, (US)

LEGAL REPRESENTATIVE:

Altenburg, Udo, Dipl.-Phys. et al (1268), Patent- und Rechtsanwälte
Bardehle-Pagenberg-Dost-Altenburg Frohwitter-Geissler & Partner
Postfach 86 06 20, W-8000 Munchen 86, (DE)

PATENT (CC, No, Kind, Date): EP 419889 A2 910403 (Basic)
EP 419889 A3 930421

APPLICATION (CC, No, Date): EP 90116841 900903;

PRIORITY (CC, No, Date): US 414045 890928

DESIGNATED STATES: DE; ES; FR; GB; IT

INTERNATIONAL PATENT CLASS (V7): G06F-015/413; G06F-015/419;

CITED REFERENCES (EP A):

ACM TRANSACTIONS ON DATABASE SYSTEMS. vol. 2, no. 1, March 1977, NEW YORK
US pages 11 - 26 BAYER, UNTERAUER 'Prefix B-Trees'

IBM TECHNICAL DISCLOSURE BULLETIN. vol. 24, no. 5, October 1981, NEW YORK
US pages 2492 - 2496 LOMET 'PREFIX* B-TREES'

COMMUNICATIONS OF THE ASSOCIATION FOR COMPUTING MACHINERY. vol. 26, no.
9, September 1983, NEW YORK US pages 646 - 653 WATANABE, OSHAWA 'A
SIMPLE DATABASE LANGUAGE FOR PERSONAL COMPUTERS';

ABSTRACT EP 419889 A2

A prefix index tree structure for locating data records stored through
keys related to information stored in data records. Each node includes a
prefix field for a prefix string of length p of the longest string of key
characters shared by all subtrees of the node and a data record field for
a reference to a data record whose key is completed by the prefix string.
A node may include one or more branch fields when the prefix string is a
prefix of keys stored in at least one subtree of the node, with a branch
field for each distinct p+1(sup(st) key character in the keys, wherein
each p+1(sup(st) key character is a branch character. Each branch field
includes a branch character and a branch pointer field for a reference to
a node containing at least one **key** whose p+1(sup(st) character is the
branch character. Each node further includes a field for storing the
number of **key** characters in the prefix string and a field for storing
the number of branch fields in the node. Also disclosed are methods for
constructing and searching a prefix index **tree** of the **present**
invention, and for **inserting nodes** into the **tree** and deleting nodes
from the **tree**. (see image in original document)

ABSTRACT WORD COUNT: 216

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application: 910403 A2 Published application (A1with Search Report
;A2without Search Report)

Search Report: 930421 A3 Separate publication of the European or
International search report

Examination: 930915 A2 Date of filing of request for examination:
930714

*Assignee: 950308 A2 Applicant (transfer of rights) (change): Bull
HN Information Systems Inc. (405377) Technology
Park Billerica, MA 01821-4199 (US) (applicant
designated states: DE;ES;FR;GB;IT)

*Assignee: 950823 A2 Applicant (transfer of rights) (change): Bull
HN Information Systems Inc. (405378) 300
Concord Road Billerica, MA 01821-4186 (US)
(applicant designated states: DE;ES;FR;GB;IT)

*Assignee: 950823 A2 Previous applicant in case of transfer of
rights (change): Bull HN Information Systems
Inc. (405377) 300 Concord Road Billerica, MA
01821-4186 (US) (applicant designated states:
DE;ES;FR;GB;IT)

Examination: 960124 A2 Date of despatch of first examination report:
951208

Withdrawal: 970409 A2 Date on which the European patent application
was withdrawn: 970213

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPABF1	1340
SPEC A	(English)	EPABF1	8004
Total word count - document A			9344
Total word count - document B			0
Total word count - documents A + B			9344

...ABSTRACT and a branch pointer field for a reference to a node containing

at least one **key** whose p+1(sup(st) character is the branch character.
Each node further includes a field for storing the number of **key**
characters in the prefix string and a field for storing the number of
branch fields in the node. Also disclosed are methods for constructing
and searching a prefix index **tree** of the **present** invention, and for
inserting nodes into the **tree** and deleting nodes from the **tree** .
(see image in original document)

...SPECIFICATION key character in the keys of the subtrees, wherein each
distinct p+1(sup(st) **key** character is a branch character. Each branch
field includes a branch character field for storing the p+1(sup(st)
character of a **key** and a branch pointer field for storing a reference
to a node of a subtree containing at least one **key** whose p+1(sup(st)
character is the branch character.

In further embodiments of the **present** invention, each **node** further
includes a field for storing a number equal to the number of **key**
characters in the prefix string, and a field for storing a number equal
to the number of branch fields in the **node** .

The **present** invention further includes methods for constructing and
searching a prefix index **tree** of the **present** invention, and for
inserting nodes into the **tree** and deleting nodes from the **tree** .

Brief Description of the Drawings

The foregoing and other objects, features and advantages of the...

25/5,K/9 (Item 9 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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00316687

Concurrent record access database system using an index tree structure and method therefor

Datenbanksystem und Verfahren für den gleichzeitigen Satzzugriff mit Hilfe eines Baumstrukturindexes

Systeme de base de donnees et methode pour l'accès concurrent d'enregistrements en utilisant un index a structure d'arbre

PATENT ASSIGNEE:

International Business Machines Corporation, (200120), Old Orchard Road, Armonk, N.Y. 10504, (US), (applicant designated states: DE;FR;GB;IT)

INVENTOR:

Levine, Frank Eliot, 9406 Chapel Down Street, Austin Texas 78729, (US)
Mohan, Chandrasekaran, 3837 Ramirez Court, San Jose California 95121, (US)

LEGAL REPRESENTATIVE:

Bailey, Geoffrey Alan (27921), IBM United Kingdom Limited Intellectual Property Department Hursley Park, Winchester Hampshire SO21 2JN, (GB)

PATENT (CC, No, Kind, Date): EP 314292 A2 890503 (Basic)

EP 314292 A3 920715

EP 314292 B1 960417

APPLICATION (CC, No, Date): EP 88308752 880921;

PRIORITY (CC, No, Date): US 115146 871030

DESIGNATED STATES: DE; FR; GB; IT

INTERNATIONAL PATENT CLASS (V7): G06F-017/30;

CITED REFERENCES (EP A):

IEEE TRANSACTIONS ON SOFTWARE ENGINEERING. vol. SE-10, no. 6, November 1984, NEW YORK US pages 777 - 781; U. MANBER: 'Concurrent maintenance of binary search trees'

COMPUTING SURVEYS vol. 11, no. 2, June 1979, pages 121 - 137; D. COMER: 'The ubiquitous B-tree'

IBM TECHNICAL DISCLOSURE BULLETIN. vol. 19, no. 10, March 1977, NEW YORK US pages 3887 - 3889; R. BAYER ET AL.: 'Locking protocols for concurrent operations on B-trees';

ABSTRACT EP 314292 A2

A data base system on a computer uses an index tree containing record keys which reference associated records in the data base. The tree, which comprises a root node extending through intermediate nodes to leaf nodes, provides concurrent accesses to a plurality of users. When changes are to be made to the key structure, action has to be taken to prevent users, other than the user making the change, from corrupting the data or receiving corrupted data. To do this, when one user is inserting or deleting a key and its associated record, all accesses to a node being traversed by this user and the immediately traversed node are limited to read accesses by other users. At the leaf node, all accesses by others to the key and record being added or deleted are prevented together with accesses to the next successively located record key and its associated record. After the deletion or insertion, the access limitations are removed. (see image in original document)

ABSTRACT WORD COUNT: 168

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application: 890503 A2 Published application (A1with Search Report ;A2without Search Report)

Examination: 891004 A2 Date of filing of request for examination: 890809

Change: 901227 A2 Representative (change)

Search Report: 920715 A3 Separate publication of the European or International search report

Examination: 941123 A2 Date of despatch of first examination report:

941012

Grant: 960417 B1 Granted patent
Oppn None: 970416 B1 No opposition filed
Lapse: 991020 B1 Date of lapse of European Patent in a
contracting state (Country, date): IT
19960417,

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPABF1	819
CLAIMS B	(English)	EPAB96	1126
CLAIMS B	(German)	EPAB96	1086
CLAIMS B	(French)	EPAB96	1191
SPEC A	(English)	EPABF1	4475
SPEC B	(English)	EPAB96	4780
Total word count - document A			5294
Total word count - document B			8183
Total word count - documents A + B			13477

...SPECIFICATION for a transaction involving insertion or deletion of a current record and its corresponding record **key** , the steps of:

...traversing through said nodes from said root node to a leaf node using said record **keys** in response to an input request; limiting to other users all but read accesses to...

...node being traversed and an immediately previously traversed node; identifying a next successively located record **key** relative to the record **key** to be deleted or **inserted** in the leaf **node** and limiting all access to the leaf node; limiting all accesses to a record associated with said next successively located record **key** ; inserting or deleting said current record and its corresponding record **key** ; and removing said access limitation to said record associated with the next successively located record **key** and all access limitations to the traversed **nodes** .

There is further provided a digital data processing system for effecting simultaneous transactions on a database by multiple users using an index **tree** of record keys, said **tree** having a root node and lower level nodes, each node, except those in a lowest...a node splitting algorithm. In this algorithm a new node is added to the index **tree** to store the newly inserted **key** record. Additionally all the preceding, or parent, nodes in the index **tree** may be updated to reflect the **addition** of this new **node** and the information contained therein. In step 500, a new node is obtained. In step 502, the new node is X-Latched. In step 504 a portion of the **keys** from the node that is being split is moved to the new node. It should be apparent that a pointer is also **included** in the **node** being split to reference the new node. Additionally, if required, a pointer in the new...

...SPECIFICATION a node splitting algorithm. In this algorithm a new node is added to the index **tree** to store the newly inserted **key** record. Additionally all the preceding, or parent, nodes in the index **tree** may be updated to reflect the **addition** of this new **node** and the information contained therein. In step 500, a new node is obtained. In step 502, the new node is X-Latched. In step 504 a portion of the **keys** from the node that is being split is moved to the new node. It should be apparent that a pointer is also **included** in the **node** being split to reference the new node. Additionally, if required, a pointer in the new

25/5,K/12 (Item 12 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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01346071

**METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR IMPLEMENTING
SINGLE-NODE AND CLUSTER SNAPSHOTS**

**PROCEDES, SYSTEMES ET PRODUITS DE PROGRAMME INFORMATIQUE POUR IMPLEMENTER
DES INSTANTANES DE SIMPLE NOEUD ET DE GRAPPES**

Patent Applicant/Assignee:

RED HAT INC, 1801 Varsity Drive, Raleigh, NC 27606, US, US (Residence),
US (Nationality), (For all designated states except: US)

Patent Applicant/Inventor:

MARZINSKI Benjamin Elliot, 3347 Bloomington Avenue, Minneapolis, MN 55407
, US, US (Residence), US (Nationality), (Designated only for: US)

PHILLIPS Daniel Raymond, 60 Laurie Shepway, Toronto, Ontario M2J 1X6, CA,
CA (Residence), CA (Nationality), (Designated only for: US)

Legal Representative:

KAHNG Anthony H et al (agent), Wilmer Cutler Pickering Hale and Dorr LLP,
60 State Street, Boston, MA 02109, US

Patent and Priority Information (Country, Number, Date):

Patent: WO 200629032 A2 20060316 (WO 0629032)

Application: WO 2005US31439 20050906 (PCT/WO US2005031439)

Priority Application: US 2004606898 20040903

Designated States:

(All protection types applied unless otherwise stated - for applications
2004+)

AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM
DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KM KP KR KZ
LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NG NI NO NZ OM PG PH PL
PT RO RU SC SD SE SG SK SL SM SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU
ZA ZM ZW

(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LT LU LV MC NL
PL PT RO SE SI SK TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) BW GH GM KE LS MW MZ NA SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

International Patent Class (v8 + Attributes)

IPC + Level Value Position Status Version Action Source Office:

G06F-0017/30 A I F B 20060101 H US

Publication Language: English

Filing Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 13058

English Abstract

A computer assisted method of organizing a data structure for managing a computer storage device that contains a plurality of blocks. The method comprises initializing entries of the data structure to indicate that the blocks are shared between an origin and one or more snapshots and receiving a first request to modify a first portion of the storage device. The method also includes identifying a first chunk that contains the first portion to be modified, wherein the first chunk includes at least one block and writing first metadata into an entry of the data structure to indicate that the first chunk is unshared. The method also includes allowing the first chunk to be modified. Similar systems and software products are also described.

French Abstract

La presente invention concerne un procede assiste par ordinateur pour organiser une structure de donnees afin de gerer un dispositif memoire informatique qui contient une pluralite de blocs. Le procede comprend

l'initialisation d'entrees de la structure de donnees pour indiquer que les blocs sont partages entre une origine et un ou plusieurs instantanes, et la reception d'une premiere demande de modification d'une premiere partie du dispositif memoire. Le procede comprend egalement l'identification d'un premier fragment qui contient la premiere partie a modifier, le premier fragment comprenant au moins un bloc, et l'ecriture de premieres metadonnees dans une entree de la structure de donnees, pour indiquer que le premier fragment est non partage. Le procede implique egalement de rendre possible la modification du premier fragment. L'invention a egalement pour objet des systemes similaires et des produits logiciels.

Legal Status (Type, Date, Text)

Publication 20060316 A2 Without international search report and to be republished upon receipt of that report.

Fulltext Availability:
Detailed Description

Detailed Description

... and descending recursively into the node referenced by the sector address lying between the two **keys** that bound the target **key** .

[00751 In various embodiments of the present invention, a search can be conducted all the...

...For write requests, this procedure may not be inefficient because an exception can be immediately **added** to the leaf **node** if one is not **present** . For read requests it's a little more chunks, or 16 petabytes volume size limit with a minimal 4K chunk size. It is always fully populated, i. 4@. , the **tree** is created at the time the snapshot store is created and changed only if the...

25/5,K/15 (Item 15 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00512799 **Image available**

FAST STRING SEARCHING AND INDEXING

RECHERCHE ET INDEXATION RAPIDES DE CHAINES DE CARACTERES

Patent Applicant/Assignee:

SAP AKTIENGESELLSCHAFT,
BRAUN Bernhard,

Inventor(s):

BRAUN Bernhard,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9944151 A1 19990902

Application: WO 99EP1210 19990225 (PCT/WO EP9901210)

Priority Application: US 9831285 19980226

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH
GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN
MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU
ZW GH GM KE LS MW SD SL SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY
DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW ML
MR NE SN TD TG

Main International Patent Class (v7): G06F-017/30

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 13685

English Abstract

A fast string indexing method efficiently stores, searches, and removes alphanumeric or binary strings utilizing a compacted search tree. The number of levels in the search tree is minimized by having a node represent more than one character when possible. Each inner node of the tree contains a hash table array for successive hashing, which also minimizes the time required to traverse a given node. Searches may be performed for partial matches, such as wild cards at the character level. Multiple indices may be opened independently and concurrently on the same table of string entries.

French Abstract

Un procede d'indexage rapide de chaines de caracteres, permet de memoriser, rechercher et extraire efficacement des chaines de caracteres alphanumeriques ou binaires, au moyen d'un arbre de recherche compacte. Le nombre de niveaux dans l'arbre de recherche est minimise grace a un noeud representant plus d'un caractere lorsque c'est possible. Chaque noeud interne contient un groupe de tables de hachage pour le hachage successif, ce qui minimise egalement le temps requis pour la traversée d'un noeud donne. Des recherches de correspondances partielles, telles que des caracteres jokers au niveau des caracteres, peuvent etre assurees. Des indices multiples peuvent etre ouverts separement et concurremment sur la meme table d'entrees de chaines.

Fulltext Availability:

Detailed Description

Detailed Description

... the backtracking stack (namely, nodes 1070 and 1080) may be discarded, thereby pruning the index tree.

The only remaining node still in the

backtracking stack, node 1040, is popped. This is...

...leaf

node, and FI seeks the first non-wildcard character position <j> where the search **key** differs from the **key** string associated with node 1040. However, "*b*cd" and lld*c**" match, so the **key** entry associated with **node** 1040 is **added** to the result buffer. **There** are no more **nodes** to be considered, and the result stack is returned.

Substitute Sheet (Rule 26)

31/5,K/6 (Item 6 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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01349176 **Image available**

APPARATUS, AND AN ASSOCIATED METHOD, FOR FACILITATING FAST TRANSITION IN A NETWORK SYSTEM

APPAREIL ET PROCEDE ASSOCIE FACILITANT UNE TRANSITION RAPIDE DANS UN SYSTEME DE RESEAU

Patent Applicant/Assignee:

NOKIA CORPORATION, Keilalahdentie 4, FIN-02150 Espoo, FI, FI (Residence),
FI (Nationality), (For all designated states except: US)

NOKIA INC, 6000 Connection Drive, MS 1-4-755, Irving, TX 75039, US, US
(Residence), US (Nationality), (For all designated states except: US)

Patent Applicant/Inventor:

FACCIN Stefano, 3421 Dartmoor Drive, Dallas, TX 75229, US, US (Residence),
IT (Nationality), (Designated only for: US)

EDNEY Jonathan P, 31 High Street, Willingham Cambridgeshire CB4 5ES, GB,
GB (Residence), GB (Nationality), (Designated only for: US)

Legal Representative:

JEANG Wei Wei et al (agent), Haynes and Boone, LLP, 901 Main Street,
Suite 3100, Dallas, TX 75202-3789, US

Patent and Priority Information (Country, Number, Date):

Patent: WO 200632046 A1 20060323 (WO 0632046)

Application: WO 2005US33350 20050915 (PCT/WO US2005033350)

Priority Application: US 2004609944 20040915; US 2004609943 20040915

Designated States:

(All protection types applied unless otherwise stated - for applications
2004+)

AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM
DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KM KP KR KZ
LC LK LR LS LT LU LV LY MA MD MG MK MN MW MX MZ NA NG NI NO NZ OM PG PH
PL PT RO RU SC SD SE SG SK SL SM SY TJ TM TN TR TT TZ UA UG US UZ VC VN
YU ZA ZM ZW

(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LT LU LV MC NL
PL PT RO SE SI SK TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) BW GH GM KE LS MW MZ NA SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

International Patent Class (v8 + Attributes)

IPC + Level Value Position Status Version Action Source Office:

H04L-0012/28 A I F B 20060101 H EP

Publication Language: English

Filing Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 10458

English Abstract

An apparatus, system, computer-readable medium, and method to facilitate quick transition of communications of a mobile station between network stations of a radio communication system, such as a WLAN operable to a variant of an IEEE 802 operating specification, is provided.

Implementations of embodiments described herein reduce the transition duration by a pre-keying mechanism that performs authentication procedures prior to commencement of reassociation procedures. In other embodiments, a mobile station is allowed to select whether to perform pre-keying processes over an air interface with a target transition access point or whether to perform the pre-keying processes over a distribution system.

French Abstract

L'invention concerne un appareil, un systeme, un support visible sur

ordinateur et un procede facilitant une transition rapide de communications d'une station mobile entre des stations de reseau d'un systeme de radiocommunication tel qu'un reseau local sans fil WLAN pouvant fonctionner sur une variante d'une specification d'exploitation IEEE 802. Les mises en application des modes de realisation ici decrits reduisent la duree de transition par un mecanisme de pre-introduction par clavier executant des procedures d'authentification avant le commencement de procedures de reassociation. Dans d'autres modes de realisation, une station mobile est autorisee a choisir entre executer des processus de pre-introduction par clavier sur une interface hertzienne avec un point d'accès de transition cible et executer des processus de pre-introduction par clavier sur un systeme de distribution.

Legal Status (Type, Date, Text)

Publication 20060323 A1 With international search report.

Publication 20060323 A1 Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

Fulltext Availability:

Detailed Description

Detailed Description

... STA 520.

AP 541 then generates an FT response message comprising a MIC and EAPOL-**Key** frame 715 and sends the FT response in message including EAPOL-**Key** frame 715 to...

...715 may include various parameters or values for facilitating authentication of STA 520. In the **present** example, EAPOL- **Key** frame 715 includes the AP's RSN information element (A[
RSN) from the APs Beacon...

...include a resource response.

EAPOL-**Key** frame 715 may be encapsulated in one or more **data structures**, such as an information element having a header and one or more **appended** information **elements**. A header of EAPOL-**Key** frame 715 or an encapsulating **data structure** may include an identifier, e.g., a MAC address, of AP 541 in a source...

...the address of STA 520 in a destination address field. Various other data may be **included** in EAPOL- **Key** frame 715 or an encapsulating **data structure** thereof as header or overhead **data**. For example, a reassociation deadline may be specified by AP 541 and included in a header or field of EAPOL-**Key** frame 715 or in an encapsulating **data structure** thereof. The reassociation deadline may specify a time allotted for STA...messages or contents thereof. The FT response message may additionally include a resource response.

EAPOL- **Key** frame 715 may be encapsulated in one or more **data structures**, such as an information element having a header and one or more **appended** information **elements**. A header of EAPOL- **Key** frame 715 or an encapsulating **data structure** may include an identifier, e.g., a MAC address, of AP 541 in a source...

...the address of STA 520 in a destination address field. Various other data may be **included** in EAPOL- **Key** frame 715 or an encapsulating **data structure** thereof as header or overhead **data**. For example, a reassociation deadline may be specified by AP 541 and included in a header or field of EAPOL-**Key** frame 715 or in an encapsulating **data**

structure thereof. The reassociation deadline may specify a time allotted for STA 520 to initiate reassociation...

...1 generates an FT Action Response (Act Resp) message comprising a MIC and an EAPOL- **Key** frame 715 and sends the Action Response message including EAPOL-Key frame 715 to STA...

...715 may include various parameters or values for facilitating authentication of STA 520. In the **present** example, EAPOL **Key** frame 715 includes the AP's RSN information element (AP RSN) from the APs Beacon...

...include a resource response.

EAPOL-Key frame 715 may be encapsulated in one or more **data structures**, such as an information element having a header and one or more **appended** information **elements**. A header of EAPOL-Key frame 715 or an encapsulating **data structure** may include an identifier, e.g., a MAC address, of AP 541 in a source...

...address of STA 520 in a
14

destination address field. Various other data may be **included** in EAPOL-**Key** frame 715 or an encapsulating **data structure** thereof as header or overhead **data**. For example, a reassociation deadline may be specified by AP 541 and included in a header or field of EAPOL-Key frame 715 or in an encapsulating **data structure** thereof. The reassociation deadline may specify a time allotted for STA 520 to initiate reassociation...

...messages or contents thereof. The FT response message may additionally include a resource response.

EAPOL- **Key** frame 715 may be encapsulated in one or more **data structures**, such as an information element having a header and one or more **appended** information **elements**. A header of EAPOL- **Key** frame 715 or an encapsulating **data structure** may include an identifier, e.g., a MAC address, of AP 541 in a source...

...the address of STA 520 in a destination address field. Various other data may be **included** in EAPOL- **Key** frame 715 or an encapsulating **data structure** thereof as header or overhead **data**. For example, a reassociation deadline may be specified by AP 541 and included in a header or field of EAPOL-Key frame 715 or in an encapsulating **data structure** thereof. The reassociation deadline may specify a time allotted for STA 520 to initiate reassociation...

31/5,K/8 (Item 8 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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01079219 **Image available**

METHOD AND MEANS FOR 2D-GEL-IMAGE SEGMENTATION

PROCEDE ET DISPOSITIF POUR SEGMENTATION D'IMAGES DE GEL BIDIMENSIONNELLES

Patent Applicant/Assignee:

LUDESI AB, Vaxthuset Ideon, S-223 70 Lund, SE, SE (Residence), SE
(Nationality), (For all designated states except: US)

Patent Applicant/Inventor:

WALLMARK Gustav, Gladstonevagen 3, S-224 56 Lund, SE, SE (Residence), SE
(Nationality), (Designated only for: US)

HEYDEN Anders, Skogslyckevagen 9, S-240 10 Dalby, SE, SE (Residence), SE
(Nationality), (Designated only for: US)

KARLSSON Andreas, Trollebergsvagen 24A, S-222 29 Lund, SE, SE (Residence)
, SE (Nationality), (Designated only for: US)

FORSSTROM-OLSSON Ola, Trastvagen 3, S-227 31 Lund, SE, SE (Residence), SE
(Nationality), (Designated only for: US)

Legal Representative:

EK Martin (et al) (agent), c/o Albihs Malmo AB, P.O. Box 4289, S-203 14
Malmo, SE,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200401671 A1 20031231 (WO 0401671)

Application: WO 2003SE1060 20030619 (PCT/WO SE2003001060)

Priority Application: SE 20021894 20020619

Designated States:

(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ
EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR
LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG
SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT RO SE
SI SK TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class (v7): G06T-005/00

International Patent Class (v7): G01N-033/68; G06K-009/34

Publication Language: English

Filing Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 11670

English Abstract

The present invention relates to the segmentation of two-dimensional gel electrophoresis images (2D images). The method according to the invention associates an initial protein seed candidate with an interface circumscribing said seed and thereafter brings said interface to evolve in accordance with a defined speed function $F(x, y)$. The evolution of the interface is halted by a stopping criterion, C . According to the invention, the speed function can depend on a wide variety of parameters such as the pixel intensity, the curvature of the pixel intensity, the distance to the initial seed, the curvature and/or shape and/or normal direction and/or position of the evolving interface. The stopping criterion depends e.g. on the speed function F and/or the time of arrival $T(x, y)$ and/or the departure time $T_{\text{sub}}^{\text{dfor}}$ for said interface. The invention provides criteria for a specific treatment of saturated spots and to make sure that interfaces never overlap."sub"

French Abstract

la presente invention concerne la segmentation d'images bidimensionnelles

(images 2D) de gel par electrophorese. Le procede selon l'invention associe un candidat initial de proteine d'ensemencement a une interface entourant ladite proteine pour ensuite faire evoluer cette interface selon une fonction vitesse definie $F(x, y)$. L'evolution de l'interface est stoppee par un critere d'arret, C. Selon cette invention, la fonction vitesse peut dependre des parametres les plus divers tels qu'intensite de pixels, courbure de l'intensite de pixels, distance separant de la semence initiale et/ou forme et/ou direction normale et/ou position de l'interface en evolution. Le critere d'arret depend notamment de la fonction vitesse F et/ou du moment d'arrivee $T(x, y)$ et/ou du moment de depart T_{sub}^d . Cette invention offre des criteres pour un traitement specifique de points satures et garantit que les interfaces ne se chevauchent jamais."sub"

Legal Status (Type, Date, Text)

Publication 20031231 A1 With international search report.

Fulltext Availability:

Detailed Description

Detailed Description

... of implementing a heap. The vector representation does not require any extra space if the **tree** is complete. By numbering the nodes from top to bottom and left to right, the children of node i are at $2i$ and at $2i + 1$ if they **exist**, and the parent of **node** i is at $[i/2]$ (integer part of the division) if it exists. Figure 8...
...must be supported. These are.

1. Remove smallest value of T in the heap.
2. **Add** an **element** to the heap.
3. Update a **key** value at any given position in the heap.

These operations should be possible to complete...

...heap remains proper. It is also possible to extend the heap property to handle equal **key** values. The order of the equal **key** values is not guaranteed, but this is irrelevant for the **present** invention.

Thus, in step 140 in Figure 2, an evolving interface is created around each...

31/5,K/14 (Item 14 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00529126 **Image available**

PROPOSAL BASED ARCHITECTURE SYSTEM

SYSTEME D'ARCHITECTURE BASE SUR LES PROPOSITIONS

Patent Applicant/Assignee:

KINEXIS,

Inventor(s):

TIBBETTS John J,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9960478 A1 19991125

Application: WO 99US11070 19990518 (PCT/WO US9911070)

Priority Application: US 9884199 19980520

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH
GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN
MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW
GH GM KE LS MW SD SL SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE
DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW ML MR
NE SN TD TG

Main International Patent Class (v7): G06F-009/45

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 19282

English Abstract

A proposed based architecture system that converts a transaction submission process into a generic object in a computer environment. A preferred embodiment of the invention provides a tool set which allows the user to create a set of Proposal Specifications which define the structure of the possible components of a Proposal. The Proposal is accessed via multiple User Interfaces (UI), and allows the user to add a Web or Graphical User Interface (GUI) front-end without having to rewrite a back-end application. A UI coordinator maps user input fields to components of the Proposal and communicates with different user interfaces. A set of Transaction Processing/Data Processing (TP/DP) interfaces are provided to communicate with back-end transactional interfaces such as Database Management Systems (DBMS), Transactional Processing (TP) Monitors, and Object Oriented Databases.

French Abstract

L'invention concerne un systeme d'architecture base sur les propositions (fig. 5) qui convertit un procede de soumission de transactions en un objet generique dans un environnement informatique. Dans mode de realisation prefere, une boite a outils permet a l'utilisateur de creer un serie de specifications de propositions qui definissent la structure des composants possibles d'une proposition. L'accès a la proposition se fait via de multiples interfaces d'utilisateur et permet a l'utilisateur d'ajouter un frontal d'interfaces d'utilisateur Web ou graphiques sans avoir a reecrire d'application hôte. Un coordinateur d'interface d'utilisateur met des champs d'entree d'utilisateur en correspondance avec des composants de la proposition et communique avec differents interfaces d'utilisateur. Une serie d'interfaces de traitement transactionnels/traitement de donnees (TP/DP) servent a communiquer avec des interfaces de transactions hotes telles que des systemes de gestion de base de donnees (SGBD), des moniteurs de traitement transactionnels et des bases de donnees orientee objets.

Fulltext Availability:

. Detailed Description

Detailed Description

... entry fields at the bottom where they can be viewed or edited.
Lists of the **key** fields 2003 and nonKey fields 2004 appear on the bottom right but not editable (until the next page). The concept of **key** fields is essential to managing the Proposal architecture. A **key** field is that field or set of fields that defines the uniqueness of the fieldgroup. This is analogous to the formal relational use of " **key** ". Notice that the **key** field names are **included** in the TreeView, providing a quick view of the domain structure of the Proposal.

The **tree** can be restructured with the buttons on the top right. AddChild 2005 allows the **addition** of new **child** fieldgroup to any node. InsertPeer 2006 inserts a new fieldgroup in front of the one...

...the selected node (and all its descendents). Combinations of these buttons can create any logical **tree** structure.

The Name field 2008 specifies the unique name of this fieldgroup.

Domain 2009 specifies...

31/5,K/15 (Item 15 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00472984 **Image available**

**SYSTEM FOR FINDING DIFFERENCES BETWEEN TWO COMPUTER FILES AND UPDATING THE
COMPUTER FILES**

**SYSTEME DETECTEUR DE DIFFERENCES ENTRE DEUX FICHIERS INFORMATIQUES ET MISE
A JOUR DE FICHIERS INFORMATIQUES**

Patent Applicant/Assignee:

POCKET SOFT INC,

JONES Kerry N,

Inventor(s):

JONES Kerry N,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9904336 A1 19990128

Application: WO 98US14433 19980715 (PCT/WO US9814433)

Priority Application: US 9752584 19970715

Designated States:

(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)

AL AM AT AU AZ BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM HR
HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO
NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW GH GM
KE LS MW SD SZ UG ZW AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT
SE BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

Main International Patent Class (v7): G06F-009/445

International Patent Class (v7): G06F-009/45

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 11792

English Abstract

This method and apparatus set out an updating system to convert an OLD input file (34) into a NEW file (40) with a distributed patch file (36). The OLD input file (34) is examined to locate strings in it which are stored in a table; the NEW file is tested for matches (perfect matches are not mandated) which are stored. In an iterative process, matches are refined and optimized, resulting in a smaller and more easily distributed patch file (36). The patch file (36) can be sent to locations where the OLD input file (34) is converted by the patch file into a NEW file (40).

French Abstract

Cette invention se rapporte a un procede et a un appareil constituant un systeme de mise a jour permettant de convertir un ANCIEN fichier (34) en un NOUVEAU fichier (40) a l'aide d'un fichier de correction repartit (36). On analyse l'ANCIEN fichier (34) afin d'y localiser des chaines qui sont stockees dans une table; on essaie de trouver dans le NOUVEAU fichier des correspondances (les correspondances parfaites ne sont pas obligatoires) qui sont stockees. Puis au cours d'un processus iteratif, on affine et on optimise ces correspondances, ce qui produit un fichier de correction (36) plus petit et plus facile a repartir. Il est possible d'envoyer ce fichier de correction (36) vers les endroits ou l'ANCIEN fichier (34) peut alors etre converti par le fichier de correction (36) en un NOUVEAU fichier (40).

Fulltext Availability:

Detailed Description

Detailed Description

... Fig. 4 and Fig. 2, the string table 24 is a
modified 8-way B- tree containing a plurality of nodes of five

different types. As shown in Fig. 4, a root node 42, only one is needed, contains up to seven **keys** (labeled KI through K7) and up to eight child pointers (labeled C1 through C8) which...

...leaf node 46, and an empty "parent" node 43,
1 0 all in the root **node** 42. Each interior **node** 44 (**there** may be none or a plurality), contains the same information as the root node 42, but with the **addition** of a **parent** pointer. The unique root node 42 and interior node 44 contain a child pointer identifying the interior node 44 in question. Each leaf **node** 46 (**there** may be none or several) is 1 5 identified by its location at a fixed...

31/5,K/16 (Item 16 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00380435 **Image available**

**STORAGE AND RETRIEVAL OF ORDERED SETS OF KEYS IN A COMPACT 0-COMPLETE TREE
RANGEMENT ET RECHERCHE D'ENSEMBLES ORDONNES DE CLES DANS UNE ARBORESCENCE
COMPACTE COMPLEMENTEE A ZERO**

Patent Applicant/Assignee:

SAND TECHNOLOGY SYSTEMS INTERNATIONAL INC,
MARQUIS Jean A,

Inventor(s):

MARQUIS Jean A,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9721178 A1 19970612

Application: WO 96US18510 19961118 (PCT/WO US9618510)

Priority Application: US 95565939 19951201

Designated States:

(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)

AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE HU IL
IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT
RO RU SD SE SG SI SK TJ TM TR TT UA UG US UZ VN KE LS MW SD SZ UG AM AZ
BY KG KZ MD RU TJ TM AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE
BF BJ CF CG CI CM GA GN ML MR NE SN TD TG

Main International Patent Class (v7): G06F-017/30

Publication Language: English.

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 20674

English Abstract

A computer storage system and processing method for indexing and
accessing data stored in the computer storage system, comprising a
compact multi-way search tree structure. The method employs a B-tree like
search algorithm that is independent of key type or key length because
all keys in index blocks are encoded by a log₂M bit surrogate, where M is
the maximal key length. A buffer consisting of a sorted list of key
values can be directly transformed into a representation of a C0-tree.

French Abstract

La presente invention concerne un systeme de memoire d'ordinateur et un
procede de traitement d'indexation et d'accès aux donnees stockees dans
un systeme de memoire d'ordinateur mettant en oeuvre une structure
arborescente compacte de recherche a plusieurs voies. Le procede a
recours a un algorithme de recherche selon un arbre de type B, lequel
algorithme est independant du type de cle ou de la longueur de cle etant
donne que toutes les cles des blocs d'indexation sont codees au moyen
d'un substitut binaire M de log₂, M etant la longueur maximale de la cle.
Un tampon constitue d'une liste trieée de valeurs de cles peut etre
directement transforme en une representation de l'arborescence
complementee a zero.

Fulltext Availability:

Detailed Description

Detailed Description

... level because a Split Child occurred (526). In either case, the number
n of new **keys** associated with entries of the child index block is set
as a return variable to...

...the index block is not overfull, a check is done to see whether the
present **key** is within the **key** interval range of the **present** index

block, i.e., d'lt; b'(534). If the **present key** is within the **key** interval of the **present** index block, the Reset bK Procedure is performed (538)

Regardless, the procedure returns to the Calling Procedure with the count of the new keys n **added** to the **child** index block, the distinction bit b', and the **key** bit position bK (599)

6) Search Depth Procedure

As depicted in FIG. 12, every time performed to locate the entry within the **present** index block wherein the **key** interval corresponds to the **present key**

Index variable k is set to 1 and the input variable, count c of non...b: an array B = lt;b[k]rt; of sorted in 1-bit positions in **key** K

K: search **key**

bK: current bit position in **key** K

ps: sum of non-NIL entries in previous siblings of this node

j: index of entry

d': depth of bounding node

n: count of new **keys added** to **child** index block

cn=0: count of new **keys** added to p() for current index block

bK: terminating **key** bit position in K (where last iteration of Search Depths concluded processing)

n: count of new **keys added** to **child** index block

b': distinction bit of previous **key** and **present key**

Search Depth Procedure

Fig. 12

d: a sequence L=d lt;[j]rt; of depth entries of the bounding nodes in a 0-complete **tree**

j: an index of the entry n sequence L at which to begin/resume the...

Set	Items	Description
S1	464181	AGGREGATE? ? OR AGGREGATING OR AGGREGATOR? ? OR AGGREGATIO- N? ?
S2	476015	HIERARCHY OR HIERARCHICAL OR HIERARCHIES OR TIER? OR (MULTI OR MULTIPLE? ? OR MULTIPLICITY OR PLURAL?)() (LEVEL? OR LAYE- R?) OR TIER?
S3	528263	TREE OR TREES OR BTREE? ?
S4	236218	DATA(5N)STRUCTURE? ?
S5	900648	KEY OR KEYS
S6	9503913	EXIST OR EXISTS OR EXISTING OR PRESENT OR THERE OR INCLUDED OR EXISTENCE
S7	424513	NODE OR NODES
S8	4369	(ADD OR ADDS OR ADDED OR ADDING OR ADDITION OR APPEND?? OR APPENDING OR INSERT?? OR INSERTING) (3N) S7
S9	13359	S5 (7N) (FIND OR FINDING OR FOUND OR LOCATE? ? OR LOCATING)
S10	30336	(ADD OR ADDS OR ADDED OR ADDING OR ADDITION OR APPEND?? OR APPENDING OR INSERT?? OR INSERTING) (3N) (ELEMENT? ? OR ITEM? ? OR PARENT? ? OR CHILD OR CHILDREN)
S11	2277	(S2 OR S3 OR S4) (3N) (UPDATE? ? OR UPDATING OR UP() (DATE? ? OR DATING) OR REVISION? ? OR REVI?E? ?)
S12	33294	S6 (10N) S5
S13	6	S12 (10N) (S8 OR S10)
S14	6	S13 NOT PY>2000
S15	4	RD (unique items)
S16	49	S12 AND (S8 OR S10)
S17	9	S16 AND (S1 OR S2 OR S3 OR S4)
S18	2	S17 NOT PY>2000
S19	2	RD (unique items)
S20	18390	S6 (7N) S7
S21	21	S20 AND S5 AND (S8 OR S10)
S22	2	S21 NOT PY>2000
S23	15	S9 AND (S8 OR S10)
S24	7	S23 NOT PY>2000
S25	7	RD (unique items)
S26	7	S25 NOT (S15 OR S19)
S27	21	(S12 OR S20 OR S9) AND S5 AND S11
S28	9	S27 NOT PY>2000
S29	9	S28 NOT (S15 OR S19 OR S22 OR S26)
S30	6	RD (unique items)
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22/5/1 (Item 1 from file: 8)
DIALOG(R)File 8: Ei Compendex(R)
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01084475 E.I. Monthly No: EI8201001436 E.I. Yearly No: EI82018717
**Title: EMPIRICAL EVALUATION OF ALGORITHMS FOR DYNAMICALLY MAINTAINING
BINARY SEARCH TREES.**

Author: Wright, William E.
Corporate Source: South Ill Univ, Carbondale, USA
Source: Proc Annu Conf ACM 80, Nashville, Tenn, Oct 27-29 1980. Publ by
ACM (Order n 401800), Baltimore, Md, 1980 p 505-515
Publication Year: 1980
CODEN: PACMDC
Language: ENGLISH
Journal Announcement: 8201

Abstract: Algorithms for dynamically maintaining and utilizing binary search trees are empirically compared and evaluated. The evaluation is based on the performance of the algorithms using simulated search requests. Search **keys** are generated using weights which are unknown and in general unequal. The algorithms provide for **inserting** new **nodes**, searching for **existing nodes**, and in some cases dynamically modifying the tree in an attempt to reduce its weighted path length or search time. Included in the evaluation are algorithms for height-balanced trees, weight-balanced trees, and trees of bounded balance, as well as some combination algorithms. Also included are a basic search algorithm which performs no rebalancing, and an optimizing algorithm. 23 refs.

Descriptors: *COMPUTER PROGRAMMING--*Subroutines
Classification Codes:
723 (Computer Software)
72 (COMPUTERS & DATA PROCESSING)

22/5/2 (Item 1 from file: 2)

DIALOG(R)File 2:INSPEC

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03810541 INSPEC Abstract Number: C87012858

Title: A method for generating optimum decision tree for image retrieval

Author(s): Yanagihara, Y.; Tamura, S.; Tanaka, M.

Author Affiliation: Dept. of Investigative Radiol., Nat. Cardiovascular Center Res. Inst., Suita, Japan

Journal: Systems and Computers in Japan vol.17, no.8 p.1-10

Publication Date: Aug. 1986 Country of Publication: USA

CODEN: SCJAEP ISSN: 0882-1666

U.S. Copyright Clearance Center Code: 0882-1666/86/0008-0001\$75.0/0

Language: English Document Type: Journal Paper (JP)

Treatment: Theoretical (T)

Abstract: For retrieval from image databases there is a method in which image retrieval is based on similarity image input. This retrieval method uses the contents (features) of the input exhibition image as the **key** for retrieval. However, since much calculation time is required to process the images and to extract features from them, the increase in overall retrieval time poses a problem. Thus a method is proposed which represents the process of image searching as a decision tree and executes retrieval on the tree. This is an efficient method for reducing the retrieval time since the number of features used for classification therein is small on average. It also has the merit of decreasing retrieval errors by deleting **nodes** on which **there** are many retrieval errors **adding** new **nodes** with fewer errors. The authors consider decision trees for similarity image retrieval, attempt to construct an appropriate decision tree which has a shorter retrieval time and which produces fewer retrieval errors from two given inputs ((1) a set of similarity errors used for retrieval and (2) the retrieval object set of an image database) and perform classification (retrieval) experiments. (15 Refs)

Subfile: C

Descriptors: information retrieval; pattern recognition; trees (mathematics)

Identifiers: image databases; image retrieval; similarity image; input exhibition image; image searching; decision tree; retrieval errors

Class Codes: C1160 (Combinatorial mathematics); C1250 (Pattern recognition); C7250L (Non-bibliographic systems)

26/5/4 (Item 2 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2006 Institution of Electrical Engineers. All rts. reserv.

01924469 INSPEC Abstract Number: C76016544

Title: Mathematical foundations for relational data bases

Author(s): Fadous, R.Y.

University: Michigan State Univ., East Lansing, MI, USA

Dissertation Date: 1975

Country of Publication: USA 96 pp.

Availability: Univ. Microfilms, Ann Arbor, MI, USA. Order No. 75-27259

Language: English Document Type: Dissertation (DS)

Treatment: Theoretical (T)

Abstract: A new approach to data management systems has been the introduction of a relation or table as a model for a data base. Large sets of data can be represented in a few large tables, but such a representation often leads to certain anomalies whenever data **items** are **added**, deleted, or changed. This thesis considers the problem of constructing algorithms for **finding keys** for relational data bases and for determining whether a relation is in second or third normal form. A new algorithm starts with the functional relations and finds all keys of a normalized relation. The mathematical properties of a relation in second and third normal forms are studied in detail along with the properties of prime and non-prime attributes.

Subfile: C

Descriptors: database management systems

Identifiers: relational data bases; data management systems; keys; normal form; functional relations; normalized relation; prime attributes; nonprime attributes

Class Codes: C6120 (File organisation)

30/5/4 (Item 2 from file: 2)

DIALOG(R)File 2:INSPEC

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05075500 INSPEC Abstract Number: B9203-0250-001

Title: Dynamic construction and quick search algorithms of binary balanced trees with a fidelity criterion

Author(s): Suzuki, H.; Arimoto, S.

Author Affiliation: Fac. of Comput. Sci. & Syst. Eng., Kyushu Inst. of Technol., Iizuka, Japan

Journal: IEICE Transactions vol.E74, no.9 p.2483-94

Publication Date: Sept. 1991 Country of Publication: Japan

CODEN: IEITEF ISSN: 0917-1673

Language: English Document Type: Journal Paper (JP)

Treatment: Theoretical (T)

Abstract: Proposes (i) an algorithm that dynamically constructs an asymptotically-balanced binary tree to store successively-given **keys** without knowledge of the distribution of **key** occurrence, and (ii) another algorithm for quick **key** search over the constructed tree such that: If the tree has in memory at least a **key** that is inside the Delta-neighbor (in a Hamming space) of a reference **key**, then the algorithm can **find** one of such Delta-neighbor **keys** almost with probability 1. The memory capacity required to describe a tree in the tree construction algorithm is of order being proportional to the number l of **keys** already processed. For an independently and identically distributed binary source of generating **keys**, the mean computation time required to **update** a **tree** for every **key** input can be of an order being a little higher than $(\log/\text{sub } 2/1)/\text{sup } 2/\log/\text{sub } 2/(\log/\text{sub } 2/1)$, and that required to search a Delta-neighbor **key** can be of an order being a little higher than $(\log/\text{sub } 2/1)/\text{sup } 3/$. (4 Refs)

Subfile: B

Descriptors: binary sequences; codes; trees (mathematics)

Identifiers: quick search algorithms; binary balanced trees; fidelity criterion; successively-given **keys**; quick **key** search; Hamming space; probability; memory capacity; tree construction algorithm; binary source; mean computation time

Class Codes: B0250 (Combinatorial mathematics); B6120B (Codes)

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